service Manual

Panasonic SVHS PAL TO

Video Cassette Recorder

AG-MD830E

Sec. 1 Operating Instructions

Sec. 2 Disassembly Procedures

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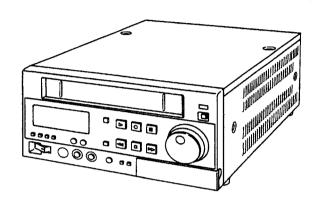
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SPECIFICATIONS

ITEM		SPECIFICATION	ITEM		SPECIFICATION
Power Television		AC 120V ~240V± 10%, 50-60Hz Approx. 35Watts		Heads	Normal Audio Control; 1 stationary head 2 ch Hi-Fi Audio; 2 rotary head Erase; 1 full track erase, 1 Audio track erase
Format Tape Speed	23.39mm/s	rd(625 lines, 50fields) PAL color signal		Tracks	Normal audio; 2 track (stereo) Hi-Fi Audio; 2 channels (stereo)
	S-VHS, VHS				LINE (PHONO) × 2; -8dB, 47kΩ unbalanced
FF/REW Time		nin. (with 180 min. tape)		Input	MIC (3.5 mm PHONE); —50 dBv, 4.7 kΩ unbalanced
Operating Condition		5℃-40℃ (41°F to 104°F) 35%-80%	Audio	Output	LINE (PHONO) \times 2; -8 dB, 600Ω unbalanced HEADPHONES (PHONE)
Weight	7.0kg	4 heads (NOR (49 μ m) × 2, SS (35 μ m) × 2)		Output	$-60 dBv$ to $-20 dBv$, 8Ω unbalanced MONITOR(PHONO) $-8 dBv$,600 Ω unbalanced
	Heads Luminance	1 flying (rotary) erase head (97 μ m) FM azimuth recording		Frequency Response	Normal; 50Hz to 10kHz Hi-Fi; 20Hz to 20kHz
		Converted subcarrier phase shift recording		Dynamic	Hi-Fi; more than 90 dB
	Input	LINE (BNC); 1.0Vp-p, 75Ω unbalanced S-VIDEO (4P); Y: 1.0Vp-p, 75Ω unbalanced		Range Signal-to- Noise Ratio	Normal; better than 42dB
Video		C: 0.3Vp-p (burst), 75Ω unbalanced LINE (BNC); 1.0Vp-p, 75Ω unbalanced	Dimensions	10 - 5/8" (270 (W) ×	W) $\times 5 - 3/16''$ (H) $\times 14 - 3/8''$ (D) 131.5 (H) $\times 365.5$ (D) mm
	Output	S-VIDEO (4P); Y: 1.0Vp-p, 75Ω unbalanced	Standard Accessories	Power Cable	
	Signal-to- Noise Ratio	C: 0.3Vp-p (burst), 75 Ω unbalanced VHS; Color; 46dB B/W; 47dB	Optional Accessories	34-pin Interf	rial Interface AG-IA823 ace AG-IA34 troller AG-A600
	Horizontal Resolution	S-VHS; 400 lines VHS; 240 lines	12000001100		te Controller ··········VW-RM1

Weight and dimensions shown are approximate. Specifications are subject to change without notice.

Panasonic

INTRODUCTION

This Service Manual contains all the technical information which will allow service personnel to understand and service the Panasonic S-VHS video cassette recorder model AG-MD 8 3 0 E. This model is developed for applications in industry and medical establishments and in addition, it has an optional accessory RS-232C Interface is a capable of satellite communication.

By the use of S-VHS system, a sharp picture quality with high resolution is obtained, and advanced editing by easy operation is realized by the introduction of highly dependable mechanisms.

Just slightly ahead of our time... Panasonic

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SAFETY PRECAUTIONS

GENERAL GUIDELINES

- When servicing observe the original lead dress. If a short circuit is found, replac all parts which have been overheated or damaged by the short circuit.
- After servicing, see to it that all the protectiv devices such as insulation barriers, insulation papers shields are properly installed.
- After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

- Unplug the AC cord and connect a jumper between the two prongs onthe plug.
- 2. Measur the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwhead connectors, contributed shafts, etc. When the exposed metallic part has a return path to the chassis, the reading shoulb be between 1M Ω and 5.2M Ω .

When the exposed metal dose not have a return path to the chassis, the reading must be ∞ .

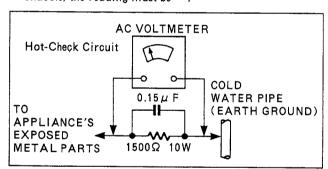


Figure 1

LEAKAGE CURRENT HOT CHECK (See Figure 1)

- Plug the AC cord directly into the AC outlet.
 Do not use an isolation transformer for this check.
- 2. Connect a $1.5\,\mathrm{K}\,\Omega$, 10W resistor, inparallel with $0.15\,\mu$ F capacitor, between each exposed metallic part on the set an a good earth ground such as a water pipe, as shown in Figure 1.
- Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measur the potential across the resistor.
- Check each exposed metallic part, and measure the voltage at each point.
- Reverse the AC plug in the AC outlet repeat each of the above measurements.
- 6. The potantial at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possiblity of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

ELECTROSTATICALLY SENSITIVE(ES) DEVICES

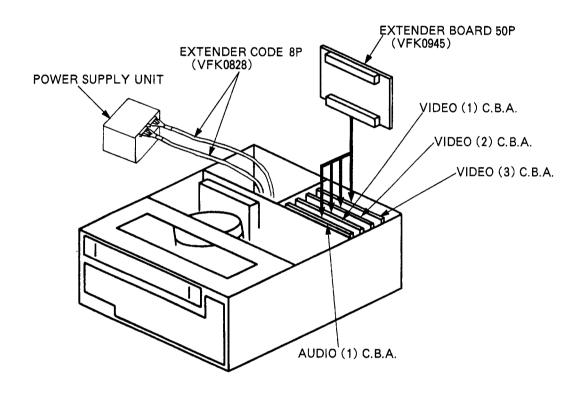
Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

- Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground.
 - Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
- After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
- Use only a grounded tip soldering iron to solder or unsolder ES devices.
- Use only an anti-static solder removal device classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
- 5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
- 6. Do not remove a replacement ES device from its protective package untilimmediately before you are ready to install it. (most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
- Immediately before removing the protective material from the leads of replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
 - CAUTION: Be sure no power is applied to the chassis or circuit, and observe all otner asfety precautions.
- 8. Minimize bodily motions when handling unpackaged replacement ES devoces. (Otherwise harmless mother such as the brushing together of your clothes fabric or the lifting of your foor from a carpeted floor can generate static electricity sufficient to damage an ES device).

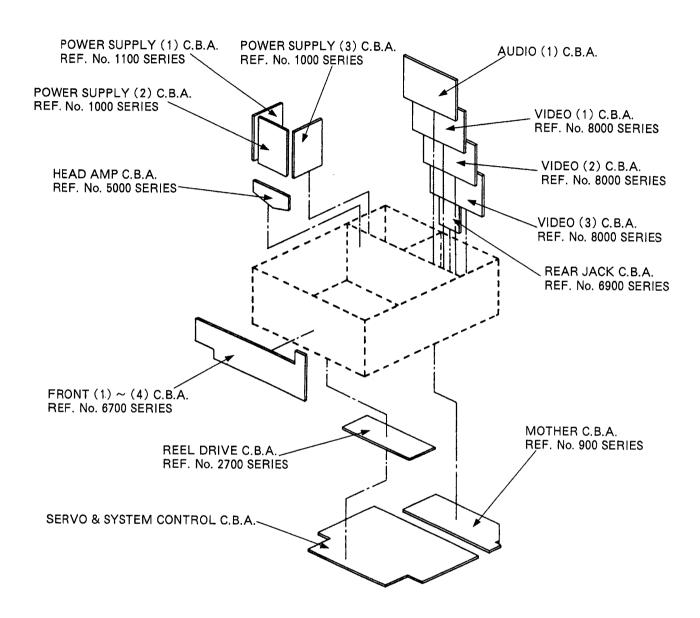
SERVICE INFORMATION

1. EXTENDERS

- 1. EXTENDER BOARD 50P (VFK0945) NEW FOR AUDIO (1), VIDEO (1), (2) and (3) P.C. BOARDs
- 2. EXTENDER CODE 8P (VFK0828) SAME AS AG-6730 etc. FOR POWER SUPPLY UNIT



2. CIRCUIT BOARD LAYOUT



SYSTEM CONTROL & SERVO C.B.A.

SYSTEM CONTROL SECTION: REF NO. 6000 SERIES SERVO SECTION: REF. No. 2000 SERIES CTL AMP SECTION: REF. No. 2300 SERIES REEL SERVO SECTION: REF. No. 2500 SERIES MOTER DRIVE SECTION: REF. No. 2300 SERIES DC-DC CONVERTOR SECTION: REF. No. 2900 SERIES

AUDIO (1) C.B.A.

NORMAL AUDIO SECTION: REF. No. 4000 SERIES Hi-Fi AUDIO SECTION: REF. No. 4000 SERIES

3. INITIALIZE (HOUR METER, MENU SETTINGS)

- 1. Turn off the Power.
- 2. Connect a jumper wire between TP8006 on the VIDEO (3) C.B.A. and TP1 on the VIDEO (1) C.B.A.
- 3. Set the MODE LOCK switch to ON.



<< HOUR METER RESET >>

Turn on the Power while the PLAY, REC and PAUSE buttons are depressed.

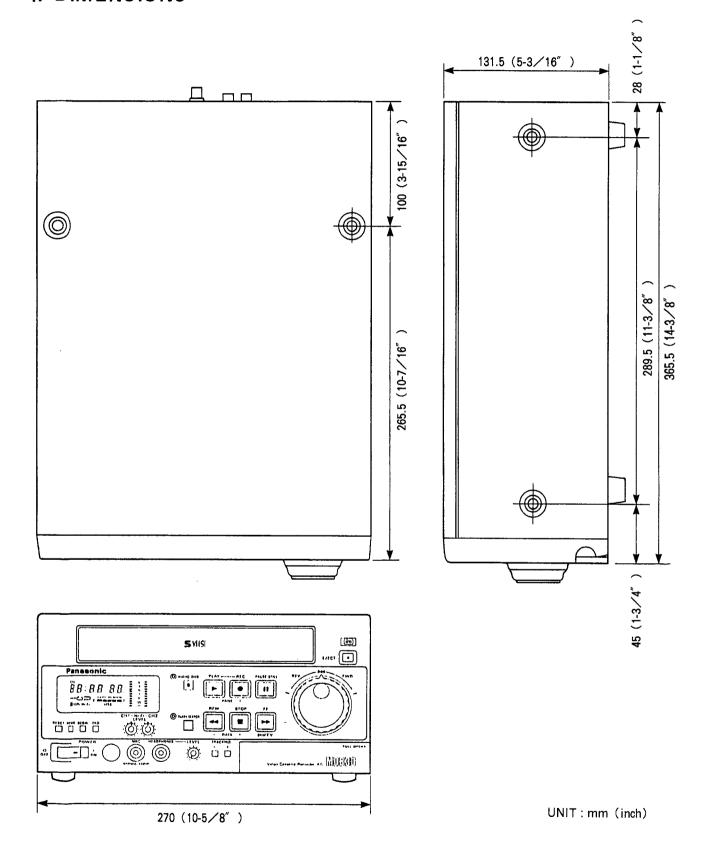


< < MENU SETTINGS RESET >>

Turn on the Power while the REW, STOP and FF buttons are depressed.



4. DIMENSIONS





SECTION 1

OPERATING INSTRUCTIONS

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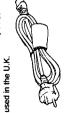
Features

Caution for AC Mains Lead

This product is equipped with 2 types of AC mains cable. One is for continental Europe, etc. and the other one is only for FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.

Appropriate mains cable must be used in each local area, since the other type of mains cable is not suitable.

FOR CONTINENTAL EUROPE, ETC. Not to be used in the U.K.



If the plug supplied is not suitable for your socket outlet, it should be cut off and appropriate one fitted. FOR U.K. ONLY



FOR U.K. ONLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience. A 13 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 13 amps and that Check for the ASTA mark @ or the BSI mark 🕏 on the it is approved by ASTA or BSI to BS1362.

body of the fuse.

If the plug contains a removable fuse cover you must If you lose the fuse cover the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be purchased from your ensure that it is refitted when the fuse is replaced.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP THE FUSE SHOULD BE REMOVED AND THE PLUG

If a new plug is to be fitted please observe the wiring code as shown below.

IMPORTANT: The wires in this mains lead are coloured WARNING: THIS APPLIANCE MUST BE EARTHED. If in any doubt please consult a qualified electrician. in accordance with the following code:

Green-and-Yellow:

Neutral Earth

As the colours of the wires in the mains lead of this ings identifying the terminals in your plug, proceed as appliance may not correspond with the coloured mark-

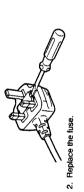
follows:

• The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the Earth symbol $\frac{1}{L}$ or coloured GREEN or GREEN-AND-YELLOW.

• The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

How to replace the fuse
1. Open the fuse compartment with a screwdriver.





The rotary erase head is featured to ensure cleaner Rotary erase head edits during editing.

Compactly designed for easy portability Illuminated operation buttons High picture quality Hi-Fi recording

A particular section on the tape can be continuously Repeat playback

The unit's jog and shuttle functions enable playback section to be located speedily using the search dial. played back repeatedly or played back once. Jog and shuttle functions

Even when an operation button has been pressed in Mode locking

The unit detects unrecorded blanks which are 5 or error, the mode lock function prevents the unit from performing the operation corresponding to that button. Unrecorded blank search

signals at particular scenes to be viewed, the scenes can be easily located and played back automatically. By writing the VISS (VHS Index Search System) Automatic high-speed VISS search more seconds in length.

Audio can be added to the normal audio track during

The unit's on-screen system enables switch settings to Switch settings on screen menus post production editing.

This facility automatically cleans the video heads to Auto head cleaning remove any dirt.

be viewed on the TV screen.

Pause remote control supported

Recording can be started and stopped by remote control using the VW-RM1 which is available as an The unit can be remote-controlled from a personal computer by mounting the AG-IA823 interface which RS-232C serial interface supported optional accessory.

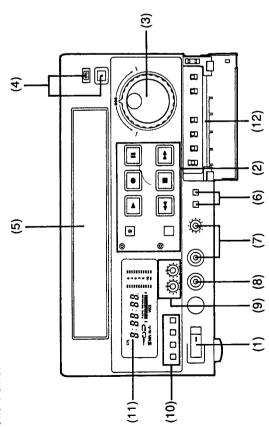
The unit can be operated from a distance of 5 meters or so using the AG-A600 (an optional accesis available as an optional accessory. 34-pin remote control supported

sory) by installing the AG-IA34 interface which is available as an optional accessory.

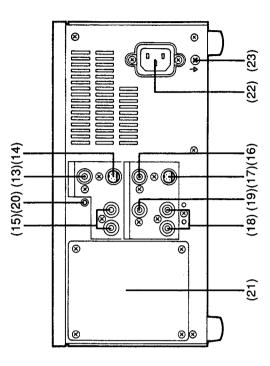
local Panasonic Dealer.

Controls

Front Panel



Rear Panel



Name	de locionas leitroscojus I	Mhon connection this cast to the	when connecting this unit to any other component, make absolutely sure that it is properly arounded by connecting this	terminal.	When connecting, use the terminal lug,	and be sure to used wire with a cross- sectional area of at least 1.0 mm².		- Continue sand	Area: Terminal Lug	More than 1.0mm²
<u>%</u>					83					
Page	E-14	E-14	E-14	E-15	E-15	E-15	ı	E-18	E-18	1
Name	VIDEO input connector (BNC)	S-VIDEO input connector (4P)	AUDIO CH1/CH2 input connectors (PHONO)	VIDEO output connector (BNC)	S-VIDEO output connector (4P)	AUDIO CH1/CH2 output connectors (PHONO)	AUDIO MONITOR output connector	PAUSE REMOTE connector	Blank panel or RS-232C/34-pin options	Power socket
No.	13	14	15	16	17	18	19	20	21	22

E-15 E-14 E-14 E-8 E-15

METER/AUDIO OUT switch (Hi-FI/NORMAL)

VIDEO INPUT selector (S-VIDEO/LINE)
S-VHS REC MODE selector (AUTO/OFF)

12

E-16

Cassette holder Tracking buttons

\$

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MENU screen selector (SET/OFF)

E-14

Headphones jack (mini jack)/ Headphone level control

7

MODE LOCK switch (ON/OFF)

1

Page

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Hi-Fi audio level control CH1/CH2

Counter setting buttons Counter/audio level meter

2 =

E-11 -E-17

Operation buttons STOP, PLAY, REC, REW, FF, PAUSE/STILL, AUDIO DUB, BLANK SEARCH

Q

6

Setting switch section AUDIO OUT selector

E-16

Eject button/tape indicator

Search dial

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Microphone jack (mini jack)

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Page

Name

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Power switch

– E-6 –

- E-7 -

Menu Screens

The menu settings can be performed while monitoring the TV screen or the level meter

Setting up your VTR for proper operation.

Operation

When you receive your VTR, it will be set up as follows:

Use the operation buttons and search dial as shown

MENU A

COUNTER	STATE OF STATE	
INDICATOR	VIDEO MONITOR	DEFAULTS
1001:00	NISS	OFF
1002:00	TAPE SELECT	E180
1003:01	AUTO BACK	NO
1004:00	TAPE IN MODE	STOP
1005:01	TAPE END MODE	REW
1006:00	REC TAPE END	STOP
1007:01	STBY OFF TIME	5 MIN

00:0FF → 01:REC 02:REC & PAUSE

00:0FF 01:REC 02:REC/PAUSE

This moves the selection item cursor backward

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00:0FF ← 01:REC 02:REC/PAUSE

00:0FF 01:REC 02:REC∠PAUSE

This returns to the previous menu page.

This moves the selection item cursor forward.

■ · vad

	DEFAULTS	8	CH1.CH2	OFF	OFF
	VIDEO MONITOR	HI-FI REC	AUDIO DUB	EDIT	NOTCH
MENU B	COUNTER	1008:01	1009:00	1010:00	1011:00

If optional AG-IA823 serial interface board is installed:

COUNTER	VIDEO MONITOR	DEFAULTS
3001:01	BIT LENGTH	8 BIT
3002:00	STOP BIT	STOP-1
3003:02	PARITY	SNON
3004:03	BAUD RATE	0096

– 4 1

This advances to the next menu page.

To reset any of these defaults:

1. Press the STOP Button to place the VTR into the stop

This moves the menu selection to the item below.

- 2. Set the MENU Switch to the SET position (switch is located under door on front panel).
- NOTE: When in the menu set position PLAY, REC, FAST FORMAND and REW will not function.

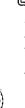
 3. You can change these settings either by watching the counter indicator on the VTR or by watching the video.
- monitor.

 4. To change the individual default settings use the PLAY or REC buttons to select the different menu pages, which will
 - 5. To select the individual settings either use the FF button or the inside search dial control. A flashing bar will highlight your selection if you are viewing your video monitor. If you use the counter indicator to make these changes, the first four dights select the item you would like to change and the last two selects the default setting (on/off, etc.).
 - 6. To change the default setting use either the STOP or REW The counter display codes are on page E-9.
- After making the necessary changes, make sure to reset the MENU set switch to OFF.

Menu Item Settings

No.	monitor	ing denotes de- fault setting)	Description of function
1001	VISS	00 : OFF 01 : REC 02 : REC/PAUSE	VISS signal recording and counter memory operation OFF: The VISS signal is not recorded (neither is the memory operation based on the VISS signal performed). The VISS signal is recorded by pressing the REC and PLAY buttons together during recording. REC/PAUSE: The VISS signal is recorded when the recording or recording pause mode is released. "VISS" appears on the display tube when REC or REC/PAUSE is selected.
1002	TAPE SELECT	00 :E180 01 : E240	E180: When a tape with a length of 180 minutes or less is used. E240-: When a tape with a length of 240 minutes or more is used.
1003	AUTO BACK	00 : OFF 01 : ON	Auto back space recording function setting ON: This ensures smooth continuity in recording. (The tape is rewound for approximately one second when the REC Button is pressed in the PLAY/STILL mode or the PAUSE/STILL Button is pressed again, the tape plays back for one second and then recording starts.) OFF: Normal REC/PAUSE operation
1004	TAPE IN MODE	00 : STOP 01 : REW	STOP: The unit is placed in the stop mode after the tape has been loaded. REW: The tape is rewound to its beginning, and then it stops.
1005	TAPE END MODE	00 : STOP 01 : REW	STOP: The tape stops when it comes to the end. REW: The tape is rewound to its beginning, and then it stops.
1006	REC TAPE END	00 : STOP 01 : EJECT	STOP: The tape stops when it comes to the end. EJECT: The tape is ejected when it comes to the end.
1007	STBY OFF TIME	00 : 0 MIN 01 : 5 MIN 02 : (30 MIN)	Standby release time 0 MIN: With full loading STOP, the tape cylinder stops immediately. 5 MIN: The tape cylinder stops after REC/PAUSE continued for 5 minutes or longer. 30 MIN: The tape cylinder stops after REC/PAUSE continued for 30 minutes or longer. minutes, however, the tape is advanced in the forward direction by 3 frames.)

* This appears along with the figure representing the setting which is indicated on the counter section of the display tube.



This turns the inside search dial (jog function).

00:ST0P 00:ST0P

TAPE IN MODE TAPE END MODE

00:ST0P 00:ST0P

TAPE IN MODE TAPE END MODE



to move the menu selection to the item above or below.

00:ST0P	00:ST0P	00:STOP
IN MODE	TAPE END MODE	IN MODE
TAPE	TAPE	TAPE

- E-9 -

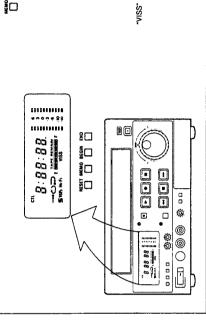
Counter indicator No.	Superimposed monitor	Setting (underlining denotes default setting)	Description of function
1008	HI-FI REC	00 : OFF 01 : ON	Hi-Fl audio recording (Cannot be used for audio DUB) OFF: Hi-Fi audio is not recorded. ON: Hi-Fi audio is recorded.
1009	Audio dub	00 : CH1.CH2 01 : CH1 02 : CH2	Selection of channel track for audio dubbing CH1.CH2: The sound is added to CH1 and CH2 simultaneously. CH1: The sound is added to CH1. CH2: The sound is added to CH2.
1010	EDIT See Note 1	00 : OFF (regular operation) 01 : ON (editing/dubbing)	Editing/regular operation selection OFF: Regular operation ON: For editing or dubbing
1011	NOTCH See Note 2	00 : OFF 01 : ON	For setting the NOTCH ON or OFF OFF: NOTCH OFF ON: NOTCH ON

The items shown below are displayed when the AG-IA823 serial interface board is used.

Counter indicator No.	Superimposed monitor	Setting (underlining denotes default setting)	Description of function
3001	BIT LENGTH	00 : 781T 01 : 881T	Character length setting 7BIT: 7 bits 8BIT: 8 bits
3002	STOP BIT	00 : STOP-1 01 : STOP-2	Stop bit setting STOP-1: 1 bit STOP-2: 2 bits
3003	PARITY	00 : ODD 01 : EVEN 02 : NONE	Parity bit setting ODD: Odd EVEN: Even NONE: None
3004	BAUD RATE	00 : 1200 01 : 2400 02 : 4800 03 : 9600	Baud rate setting 1200: 1200 bps 2400: 2400 bps 4800: 4800 bps 9600: 9600 bps

1. Edit function: 2: NOTCH:

When this is set ON, the noise reduction circuit for the video signals is set OFF. (The video noise will increase slightly. For regular use, EDIT OFF recommended.)
When there is high level of noise in the furninance signals, it may also affect the chrominance signals. In a case like this, set the NOTCH to ON Since the luminance signal aband is reduced slightly when the filter is set to ON, the NOTCH OFF position is recommended for regular use.



 This blinks white the VISS signal is being written on the tape. · It lights when VISS is set on the

No indication (OFF)

Continuous repeat

Each time the MEMORY Button is pressed, the mode changes in the following sequence:

Counter Section

memory repeat

1-time U Ð

Memory stop

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Counter Reset

The counter display is reset to "0:00:00" when the RESET Button is pressed. The BGN/END setting is also set to "0:00:00".

Press the MEMORY Button (MEMO)
 To turn on the MEMORY STOP function, the following symbol "---" will be indicated in the counter display.

To use the AUTO MEMORY STOP function:

Stop

Memory

When the VTR is placed in record a VISS signal will be placed on the video tape. 3. Now when the video tape is rewound or fast

0:00:00

Remaining Tape

This function can be turned off by pressing the MEMORY Button (MEMO).

5. Repeat playback is covered on page E-13.

forwarded it will stop at the start of any recording.

"TAPE REMAIN" provides a rough indication of the amount of tape remaining. The indication appears about 40 seconds after recording or playback has commenced (if does not appear until filts fitne).

TAPE REMAIN

Tape beginning

Tape end

A A

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Each lamp going off one after another indicates that the tape is approaching its end.

Press either REW or FF.

Press this to turn on "MEMORY STOP."

The remaining tape indicator provides only a rough indication: it is not meant to be precise.

Note:

The tape stops

automatically at the VISS write point or BGN set point.

2) Press the BEGiN and END Buttons to set the tape beginning and ending positions for repeat playback.

Memory stop

(2) While "VISS" is on the display tube: The VISS signal is used for repeat playback. (Refer to the section on the VISS signal on page E-12.)

Unrecorded blank search

STOP

PLAY STOP

Playback is repeated only once at the VISS write point.

U

MEMORY 1 TIME

REPEAT REPEAT

The tape stops at the VISS write point.

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MEMORY STOP

Playback is repeated at the VISS write point.

J Display

Function

Memory mode

MEMORY

REW

blank search

- When the beginning and ending positions are the same, the tape will be repeatedly played back between the beginning position and tape end.
 - When the ending position comes after the actual tape

Continuous

REW

repeat ĵ

→ Time

PLAY

Press the FF or REW Button.
When the VISS signal is located, the unit automatically operates in accordance with the memory

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Leave an interval of at least 30 seconds on the tape for writing the VISS signal. (The signal will not be detected if the interval is less than 30 seconds long.)

(Leave an interval of at least 30 seconds between VISS signals.)

The precision of repeat playback may be impaired when a short section (less than 20 seconds or so long) of the tape is to be repeatedly played back.

Repeat Playback

(1) Turn VISS function OFF:

1) Press the MEMORY (MEMO) Button and select continuous repeat playback (MEMORY REPEAT C) or 1-time repeat playback (MEMORY 1 TIME REPEAT 🕽).

Memory stop (→•)

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STOP

BEGIN/END settings (set VISS to OFF on the

menu) H



To be written

REC/PLAY

REC/PLAY

Locating particular scenes to be viewed becomes easy if VISS signals are written with each recording.
 "VISS" blinks on the counter section while the VISS

signal is being written.

(1) Select 01 or 02 for VISS on the menu screen.

It can also be written at the desired position on the tape by pressing the REC Button and PLAY Button

recording is started.

simultaneously during recording.

After VISS has been set on the menu screen, the VISS automatically written on the tape when

VISS Signal

VISS signal writing ("VISS" blinks while the VISS signal is being written)

VISS Setting

+ Time

STOP

STOP

REW

STOP



-1-time memory repeat

STOP

PLAY

REW

(2) Press the MEMORY Button to establish the memory

01: REC 02: REC/PAUSE

mode. "VISS" now lights on the counter section.

Continuous repeat

PLAY

REW

END point

BEGIN point

(Leave an interval of at least 20 seconds between BEGIN and END.)

STOP repeat - 1-time

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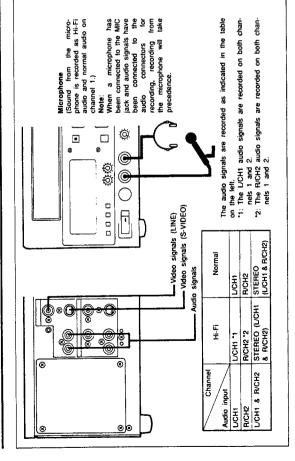
REW

Press the FF or REW Button.

When the beginning position comes before the actual tape beginning, the tape will be repeatedly played back between the tape beginning and end position. end, the tape will be repeatedly played back between the beginning position and tape end.

- E-13 -

Playback



Preparations

- Load the cassette tape. (Check that the accidental erasure prevention tab on the tape is still intact.)
- Check menu for correct set up. Set the S-VHS REC MODE selector to the desired

At this position, the tape is automatically identified as a VHS or S-VHS tape and the signals are recorded in the corresponding AUTO:

- The signals are recorded in the VHS mode regardless of the type of tape used. OFF.
- Depending on the connections, set the INPUT Selector to S-VIDEO or LINE.
- When recording Hi-Fi audio, set On-Screen Hi-Fi REC (default setting) to ON.

The audio level can be adjusted for Hi-Fi audio only. Turn the Hi-Fi Audio Level Control in such a way that the audio level meter indication is adjusted to around 3 Audio Level Adjustment (Hi-Fi audio only) the audio level meter indic (but not past the 3 level).



Recording

pressed together or press REC button first and then PLAY. If PLAY button is pressed first, the continued Recording starts when the REC and PLAY Buttons are portion is disturbed.

The REC Button will not operate if the accidental erasure prevention tab on the cassette tape has been broken out. Use a tape with this tab still intact.

(1) While playing back the tape, find the location to be Proceed as follows when using the PAUSE Button.

- The unit is now set to the playback pause mode. recorded. Then press the PAUSE Button.
- to the recording pause mode. When the PAUSE Button is pressed again, the unit is released from the pause mode, and recording The REC Lamp now comes on, and the unit is set Press the REC Button. 2 ල

Audio Monitoring

When using headphones, the volume can be adjusted The audio signals are selected by the AUDIO OUT

clockwise; to increase the audio level, turn it clock- To reduce the audio level, turn the control counterusing the Headphone Level Control.

inside the cover, the remote controller available as an optional accessory or the RS-232C remote control signals can be used to operate the unit.

This switch makes it impossible to operate the switches on the front panel. When it is set to ON, none of the front panel switch can be operated. However, even with this switch at the ON position, the setting switches

Mode Lock Switch

The audio level may change if high-impedance headphones are connected to the MIC jack.

Playback

Switches can be set even in the Mode Lock mode.

TV monitor

Preparations

Tracking control buttons

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tracking function, there is normally no need to adjust the tracking. However, if noise appears on part of the playback picture as shown below, press the Tracking +" Since this unit is equipped with an automatic digital or "-" Button on the front panel to obtain a normal Press the PLAY Button.

Switch on the power of the units connected to the

Load the pre-recorded tape.

Press the MEMORY Button to OFF

Set the following switches on the unit to OFF. Set the MODE LOCK Switch to OFF.

To return to the automatic tracking, press the Tracking "+" and "-" Buttons simultaneously. picture.

position

OUT Selector to the

corresponding to the type of sound desired. Audio Monitor Output Selector Set the AUDIO OUT Selector to the



PACKING Tracking adjustment may be necessary when playing back a tape which has been recorded on a VTR other than this unit.

interference from the monitor may affect the audio signals, resulting in noise. Be sure to keep the unit at a distance (at least 20 cm or so) from the monitor. monitor, If this unit is brought too close to the TV

- E-15 -

Rewinding and Fast Forwarding

To rewind or fast forward the tape, press the REW Button or FF Button when the tape has stopped moving.

Search/Jog Playback

Search playback (outside ring)

The unit is placed in the search mode by turning the outside ring of the search dial.

A tape can be played back up to 11 times the normal In the search mode, the FF Lamp (forward direction) or

Set the search dial to its centre click-stop position for REW Lamp (reverse direction) blinks.

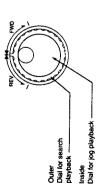
still playback.

To release the search mode, press.the PLAY, STOP, STILL, FF or REW Button.

playback (inside ring)

The unit is placed in the jog mode when the search dial When the inside ring is now turned, the lape speed can be vailed from -1x to +1x the normal tape speed. Still plaayback is established when the inside ring is no longer turned. is set to the search/pause (centre click-stop) position.

> 1 -**–** 8



- A colour programme may appear in black and white during search or jog playback: this is normal and not indicative of malfunctioning.
 - The playback pictures may appear distorted during search or jog playback: this is normal and not indica-tive of malfunctioning.
- No sound is heard during search or jog playback. Normal sound is heard at a tape speed of 1/2x or

To Finish Playback

Press the STOP Button.

Still Playback and Slow-Motion Playback

audio tracks.)

Audio Dubbing

"Audio dubbing" is a function which is used to record sound onto an already recorded tape. Sound can be recorded onto normal audio track CH1 or CH2 or onto both the CH1 and CH2 channels. (It cannot be recorded onto the Hi-Fi

The unit is placed in the still picture mode when the search dial is set to its centre click-stop position.

When noise appears during still playback, proceed with the slow tracking adjustment.





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picture during still playback or slow-motion playback (1/25 to 1/2x normal tape speed), press the Tracking +* or -** Button to reduce the noise in the slow-motion If noise should appear at the top or bottom of the Slow Tracking Adjustment playback mode

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Tape recorder (only normal audio signals are recorded)

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- When still playback continues for more than 5 minutes, the unit will be placed automatically in the stop mode in order to protect the video heads.
 - No sound is heard during still playback.
- During still playback a colour programme may appear in black or white or the playback image may darken: this is normal and not indicative of malfunctioning.

Field-by-Field Playback

the FF Button is pressed, the tape is fed by one field in the forward direction; when the REW Button is pressed, it is fed by one field in the reverse direction. When the FF or REW Button is kept depressed, the tape is played back in the torward or reverse direction at Press the FF or REW Button during still playback. When approximately 1/25th of the normal speed.

Unrecorded Blank Search

If a tape with unrecorded blanks lasting 5 or more seconds has been loaded, these blanks will be detected

Load the tape. Press the BLANK SEARCH Button. ΞQ

direction and is stopped automatically when an un-recorded blank lasting 5 or more seconds is The tape is searched automatically in the forward detected.

Operation

Microphone (only normal audio CH1 signals are recorded)

It is not possible to record MIC input audio and audio input signals at the same time. The microphone takes precedence when connections are made to both to the MIC jack and audio

- £8
- Press the PLAY Button to start playback.

 Press the PAUSE/STILL Button where the sound is to be added (audio dubbing) to place the unit in the pause mode.

(Check that the accidental erasure prevention tab on the tape is still intact. When it has been broken out, the AUDIO DUB Button will not function even if it is

pressed.)

Load the pre-recorded cassette tape.

Preparations

Using AUDIO DUB on the menu screen, select the channels on which the sound is to be added (audio

dubbing).

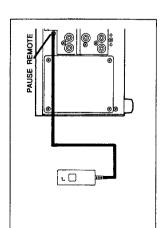
- Press the AUDIO DUB Button.
- Audio dubbing starts when the PAUSE/STILL Button is ® **₹**
 - pressed to release the unit from the pause mode.

 To stop the audio dubbing, press the STOP Button. (2)
 - When audio dubbing is performed, the previously Bear in mind that howling may occur if audio dubbing is performed with the unit placed near a recorded sound will be erased and the new sound will be recorded in its place.
 - Audio dubbing cannot be performed when the tape's accidental erasure prevention tab has been broken out.

Remote Controllers

9 remote controller tional accessory) VW-RM1 pause

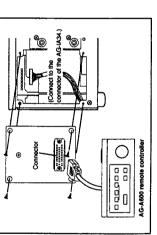
to this unit, recording can be set to the pause mode from a distance instead of using the button on the unit When the VW-RM1 pause remote controller is connected



remote controller (optional ac-AG-A600 cessory

When the AG-IA34 34-pin interface board, available as an optional accessory, is mounted, the unit can be operated by remote control at a distance of about 5 meters instead of the unit's own operation buttons being operated. The speed of the playback pictures can be varied up to about 11 times the normal speed in the forward or reverse direction.

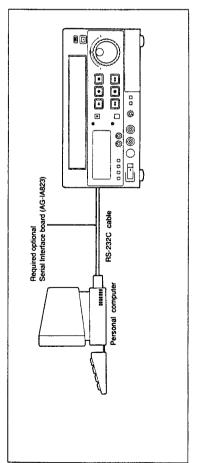
First remove the board mounting plate where the interface board is to be mounted, mount the board, connect the connector and screw the mounting board into place. Mounting the 34-pin interface board



Computer Remote Control

1 - 9

Using the optional RS-232C serial interface board (AG-IA823) and RS-232C cable, as shown in the figure below, a personal computer can be used to operate the unit in various ways.



Dew Indication the

When dew is detected, the safety device of this unit will operate in order to protect the cassette tape and video heads.

In case of dew detection, the " d " mark in the counter lights. Wait until the " d " mark goes out with Power switch turned ON to operate the VTR.

Avoid operating or storing the unit in an excessively hot, cold, or damp environment as this may result in

netic fields. Be especially careful of large audio

speakers.

Avoid operating or leaving the unit near strong mag-

Do not insert fingers or any other objects into video cassette holder.

Cautions for Use

If the unit is not going to be used for a length of time, turn the Power OFF and disconnect the power plug from the AC outlet.

Do not spray any cleaner or wax directly on the unit.

damage both to the unit and to the tape.

Do not leave a cassette in the unit when not in use.

Do not block the ventilation slots on the sides of the unit.

Use this unit horizontally and do not place anything on the top panel.

 Cassette tape can be used only for one-side, one direction recording. Two-way or two-track recordings



Keep the VTR away from flower vases, tubs, sinks,

cannot be made

CAUTION: If liquids should be spilled into the VTR, serious damage could occur. If you spill any liquid into the VTR, remove power and consult qualified

there may be cases in which the " $oldsymbol{d}$ " mark does not start flashing until 10 or 15 minutes after dew has begun to condense. In particular, if the temperature or humidity in the room change, wait about 20 minutes before using Dew condensation normally occurs gradually. Therefore the unit.

Cause of Condensation

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inside the unit, have the

examined for possible damage. Refer any needed servicing to authorized service per-

Do not attempt to disassemble the unit. There are no

user serviceable parts inside,

■ If any liquid spills

Wipe the VTR with a clean, dry cloth. Never use

service personnel

cleaning fluids, chemicals or wax.

room in winter, it may form if the unit or the video cassette is exposed to sudden changes in temperature and humidity such as may occur when the unit or the Condensation forms if warm air comes in contact with a cold object, for example on a window in a well-heated video cassette is taken from a cold to a warm place. For instance:

■ In a room where the heater has just been turned on in winter;

In a room with steam or high humidity:

If the unit or the cassette is brought from cold surroundings into a well-heated room.



cleaning tape and special purpose cleaning fluid to clean the heads. Consult with your dealer if the symptoms should persist even after cleaning.

If the screen should appear as shown below, it means that the video heads are dirty. It is recommended that you clean the heads periodically. Use the optional

Cleaning care for video heads

- We do not recommend that you attempt to clean the video heads yourself.
- Repeated head cleaning will shorten the service life of the video heads.
- Nothing can be recorded on the head cleaning If you use cleaning fluid, wipe the cleaned heads with a dry cloth before using the unit.

Troubleshooting

Check out the points in the table given below, and consult with your dealer if the trouble should persist.

Trouble	Checkpoint/Remedial Action	Ref. Page
No power	Has the power cable been connected?	
No operation even when an operation button is pressed	 Is the power switch in the ON position? Has a cassette tape been loaded? Is "d"displayed indicating condensation lighted? Keep the power supplied to the unit and wait until the "d"in display goes off. Is the Mode Lock Switch at the OFF position? 	E-19
No recording	Has the tape's accidental erasure prevention tab been broken out? Has the INPUT Selector been set to the proper position?	E-14
Noise appears on playback pictures.	 Press the Tracking Buttons and adjust. 	E-15, E-16
No repeat playback	 Has the MEMORY (MEMO) Button been set to the proper position? Has the counter been reset? Is the VISS setting on the menu screen at OFF? Has an interval of at least 20 seconds been given between BEGIN and END? 	F11 F11 F9 F13
No VISS signal writing	 Is the VISS setting on the menu screen at REC or REC/PAUSE? Has an interval of at least 30 seconds been given between one VISS and another VISS signal? 	E-9

Error Display

The following error messages will be displayed on the tape counter if an abnormality occurs in the unit. In this case, follow instructions described below.

- When an error code appears:
 An error code appears on the display.
 All operations are shut down when an error code appears on the display.
 If the error is not released even after taking the remedial action described below, switch off the power, disconnect the power cable from the power outlet, and contact your dealer immediately.

List of error codes

Error Code	Malfunction	Remedial action
<u>[</u> -]	Malfunction in elevator section	These errors may occur if the video cassette has not been loaded
£-3	Malfunction in loading section	property. Try switching the power off and turning it back on again.
h-3	Malfunction in cylinder section	These errors may occur if there is something wrong with the state of
r - 5	Mattunction in reel section	the video cassette. Try switching the power off and turning it back on
E - E	Incorrect tape tension	again and replacing the video cassette.
7-3	Malfunction in solenoid	Try switching the power off and turning it back on again.

- E-20 -

SECTION 2

DISASSEMBLY PROCEDURES

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2-1 DISASSEMBLY FLOW CHART

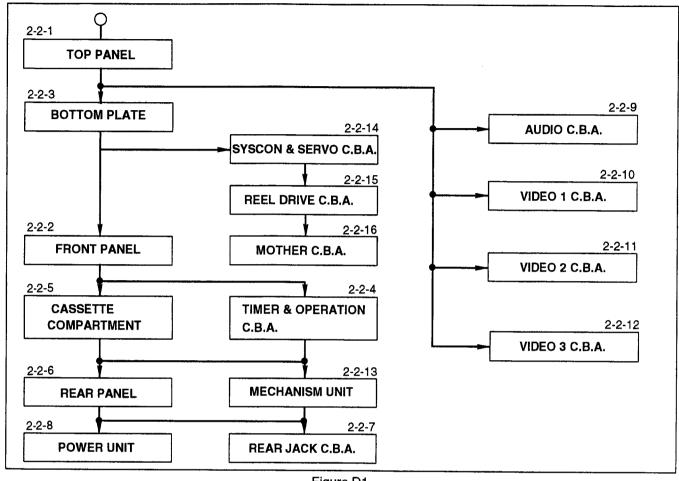


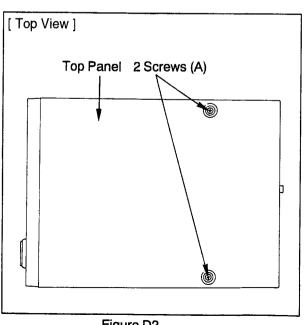
Figure D1.

The above flowchart describes the order of steps for rmoving the cabinet parts and certain printed circuit boards in order to gain access to the unit, follow the steps in the reverse order.

2-2 DETAILED DISASSEMBLY METHOD

2-2-1. Removal of the Top Panel

- 1. Unscrew 2 screws (A) on the Top Panel.
- 2. Carefully lift the rear of the Top Panel and slide it as shown in the arrow (Figure D 2).

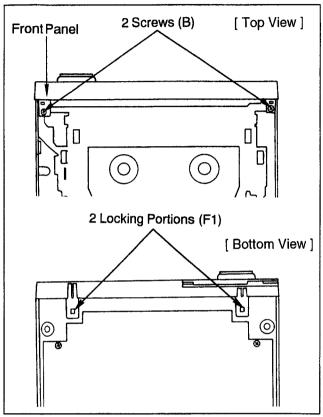


2 - 2

Figure D2

2-2-2 Removal of the Front Panel

- 1. Remove the Jog Dial on the Front Panel.
- 2. Unscrew the 2 screws (B) as shown in the Figure.
- 3. Unlock 2 locking portions (F1), and carefully pull out the Front Panel from the deck (Figure D3.).



Firure D3

2-2-3. Removal of the Bottom Plate

- 1. Unscrew 6 screws (C)on the Bottom Plate.
- 2. Lift off the Bottom Plate (Figure D4.).

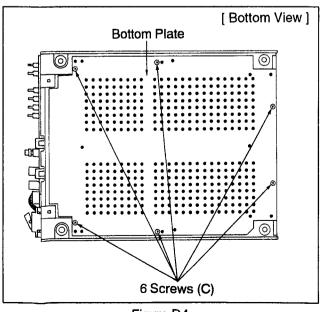


Figure D4

2-2-4. Removal of the Timer and Operation C.B.A.

- Disconnect the 2 Flexible Wires from the connector P6701 and P6702 on the Timer and Operation C.B.A..
- Unscrew the 2 screws (D) and a screw (D-1) on the Timer and Operation C.B.A and unlock 5 locking portions (F2).
- 3. Carefully remove the Timer and Operation C.B.A. (Figure D5.)

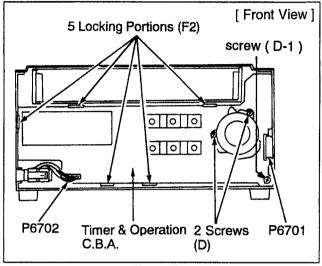


Figure D5

2-2-5. Removal of the Cassette Compartment Unit

- Unscrew 2 screws(E) and slide the Cassette Holder Until appearing 2 screws (F) and then unscrew 2 screws (F) (Figure D6.).
- Disconnect the Flexible Wire from connector P1508 mounted on the Front Loading C.B.A., then carefully pull out the Cassette Compartment Unit.

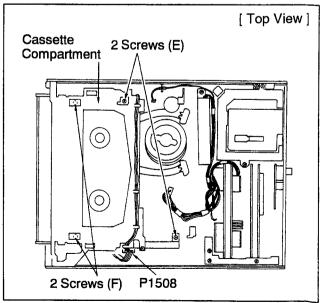


Figure D6

2-2-6 Removal of the Rear Panel

1.Unscrew 4 screws (G) and a screw (H) on the Rear Panel.

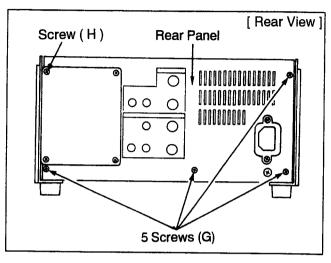


Figure D7

2-2-7 Removal of the Rear Jack C.B.A.

 Unscrew the 5 screws (J) and unscrew the 2 screws (I) as shown in Figure D8.

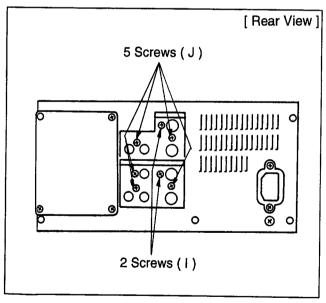


Figure D8

2-2-8 Removal of the Power Unit

- 1. Disconnect the 2 Flexible Wires from the connector P1001 and P1102 on the Power Unit.
- Unscrew 2 screws (K) on the Power Unit Shield Case (Figure D9.).
- 3. Carefully lift out the Power Unit.

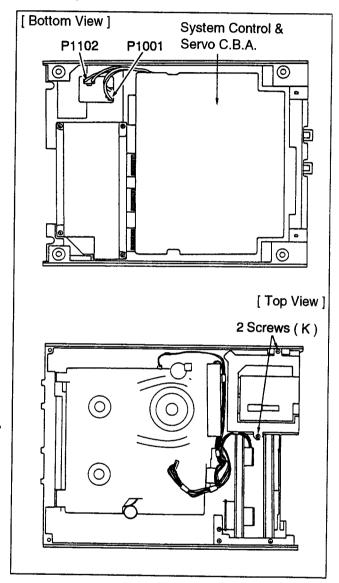


Figure D9

2-2-9 Removal of the Audio C.B.A.

- Disconnect the 4 Flexible Wires from the connector P4001, P4002, P4003 and P4502 on the Audio C.B.A. (Figure D10.).
- 2. Carefully pull out the Audio C.B.A. (Figure D11.).

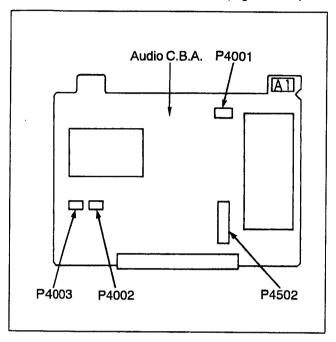


Figure D10

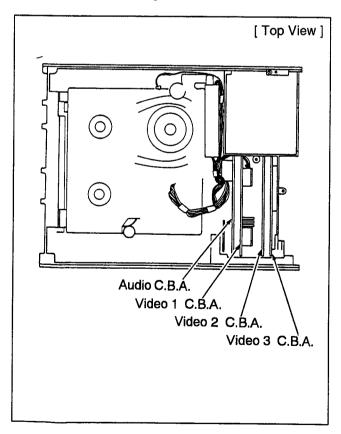


Figure D11

2-2-10 Removal of the Video 1 C.B.A.

- 1. Disconnect the Flexible Wires from the connector P3002 on the Video 1 C.B.A..
- 2. Carefully pull out the Video 2 C.B.A. (Figure D12.).

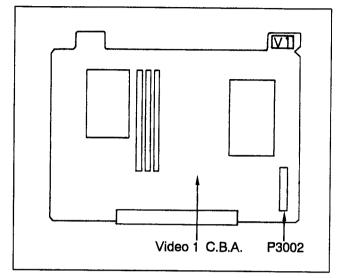


Figure D12

2-2-11 Removal of the Video 2 C.B.A.

1. Carefully pull out the Video 2 C.B.A. (Figure D11.).

2-2-12 Removal of the Video 3 C.B.A.

1. Carefully pull out the Video 3 C.B.A. (Figure D11.).

2-2-13 Removal of the Mechanism Unit

- 1. Unscrew a screw (L) on the Head Amp Shield Case and carefully remove the Head Amp C.B.A..
- 2. Unscrew the 2 screws (M) on the Mechanism Unit and carefully remove the Mechanism Unit. (Figure D13-1 and D13-2.)

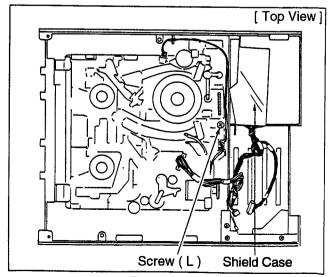


Figure D13-1

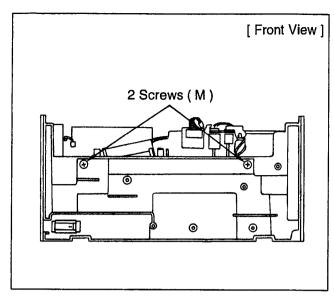


Figure D13-2

2-2-14 Removal of the System Control & Servo C.B.A.

 Unscrew the 4 screws (N) on the System Control & Servo C.B.A. and carefully open the System Control & Servo C.B.A. as shown in Figure D14.

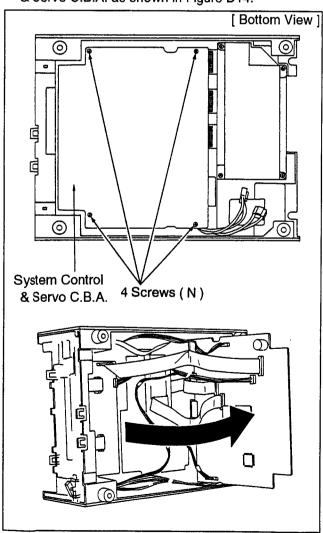


Figure D14

2-2-15 Removal of the Reel Drive C.B.A.

- 1. Disconnect the 4 Flexible Wires from the P2701, P2702, P2704 and P2705 on the Reel DriveC.B.A..
- 2. Unlock the 3 clamps (F3) on the Reel Drive C.B.A..
- 3. Remove the Reel Drive C.B.A..

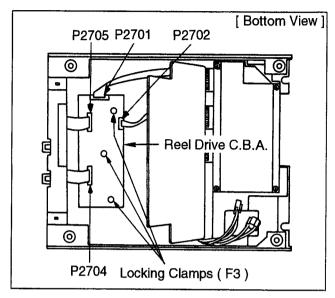


Figure D15

2-2-16 Removal of the Mother C.B.A.

Note: Before removing the Mother C.B.A., be sure to remove the Power Unit, Rear Jack C.B.A., Video Video (1), (2) and (3) C.B.A., Audio C.B.A., and System control & servo C.B.A..

- 1. Unscrews the 4 screws (O) on the Mather C.B.A..
- 2. Carefully pull out the Mother C.B.A..

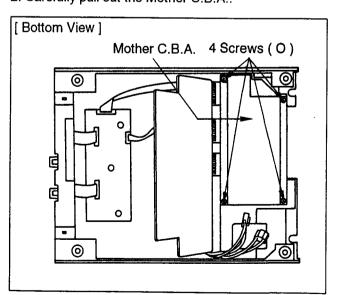


Figure D16

2-3 SCREWS

A list of screws used in item 2-2.

(A)	(B)	(C)	(D)	(D-1)
VHD0222 (SILVER)	8 mm XTW3+10LR (BLACK)	10 mm XTV3+10JFR (GOLD)	10 mm XTV3+10JFR (RED)	XTV4+10JFR (RED)
(E)	(F)	(G)	(H)	(1)
TO mm XTV4+10JFR (RED)	10 mm XTV4+10JFR (RED)	10 mm XTV4+10JFR (RED)	XYN26+6FE (BLACK)	XYN26+6FE (BLACK)
(J)	(K)	(L)	(M)	(N)
TTV4+10JFR (RED)	10 mm XTV4+10JFR (RED)	10 mm XTV3+10JFR (GOLD)	10 mm XTV4+10JFR (RED)	10 mm XTV4+10JFR (RED)
(0)				
10 mm XTV4+10JFR (RED)				

NOTE

SECTION 3

MECHANISM

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3-1. PARTS LOCATION

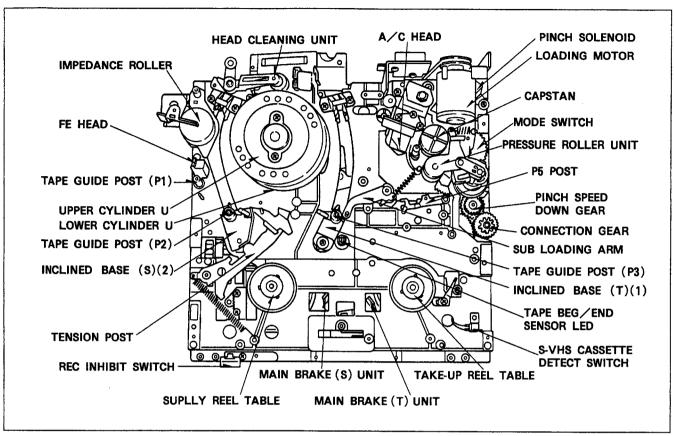


Figure M1 Top View

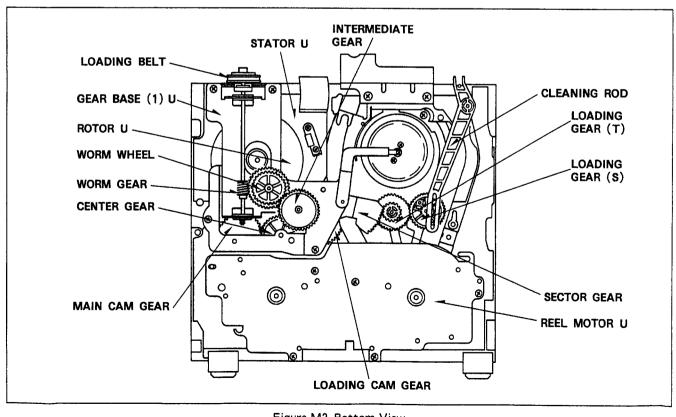


Figure M2 Bottom View

3-2. SERVICING FIXTURES AND TOOLS

The specified servicing fixture must be used to conduct adjustment.

The following fixtures, tools and measuring equipments are required to conduct complete Adjustments.

V/F140400114 m111 n / F - 111		
VFM8180HADH; VHS Alignment Tape	VFK1012; Post Adjustment Plate	VFK0335 ; Retaining Ring Remover
VFK0329 ; Post Adj. Screwdriver	VFK0328 ; H-Position Adj. Screwdriver	VFK0330 ; Fine Adj. Screwdriver (3mm)
VFK0132 ; Back Tension Meter (Tentelometer, Made in U.S.A)	VFK0190 ; Reel Table Height Fixture	VFK0951; Centering Fixture
		VI Nossi, Centening Fixible
VFK0133 ; Dial Torque Gauge VFK0180 ; Plastic Clamper Only	VFK0134 ; Adaptor for VFK0133	VFK0326; Hex. Wrench Set (0.7, 0.9, 1.2, 1.5, 1.6, 2, 2.4, 3 mm)
0133 0180	90	
VFK0236; Tension Post Adj. Plate	VFK0806 ; Tension Sensor Adj. Fixture	VFK27 ; Head Cleaning Stick
VFK0269 ; L Type Screwdriver	VFM0948; Check Light	VFK66 ; Fan Type Tension Gauge
VFK0680 ; S.C.R. Grease (White) (for plastic part)	MOR265 ; Morlytone Grease (Black) (for metal part)	VFK0131 ; High Quality Oil (for Capstan)
		Cleaning Liquid (Alchol) (Tape Tronsport Rubber Parts etc.)
		<< PURCHASE LOCALLY >>

3-3. HOW TO EJECT MANUALLY

If the electrical circuit is defective and the action of unloading and front unloading don't work properly, it is possible to eject manually as follows.

- Take out the Main AC.
 Release the direction as shown in Figure M3.
- 3. Release the Wormshaft to clockwise unit cassette is ejected.

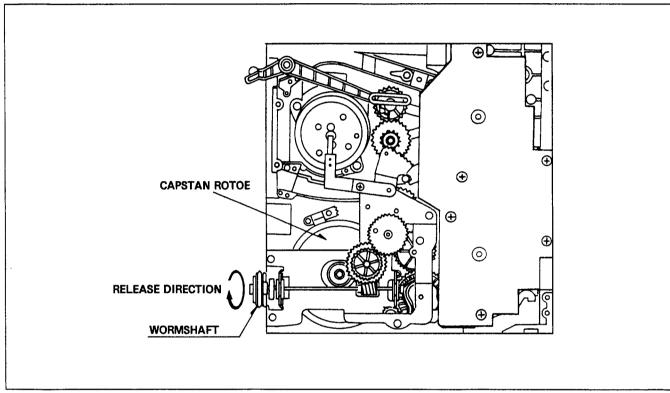


Figure M3 How to Eject Manually

3-4. MAINTENANCE PROCEDURES

3-4-1. REGULAR MAINTENANCE

The purpose of periodic maintenance is to preserve the functioning of this machine throughout its useful life. The user or service dealer should perform these maintenance regularly to ensure that maximum utility is obtained from the machine.

The VCR is a complicated place of equipment. It contains many belts, rollers, heads etc., which become worn, and deterlorate as time goes by, causing trouble. Dust and dirt will also impede the proper functioning of the machine. In light of this, it is very important that overall maintenance be done according to the maintenance chart to maintain the functions of the VCR, and to avoid accidental problems. This maintenance should also be performed after any repairs are done on the equipment.

The VCR used for business applications requires particular attention for several reasons. The installation conditions and applications are not always the best. Long use times, or poor environmental conditions may adversely affect the lifespan and performance of the machine. Regular maintenance assures that the purchaser obtains the maximum value for his expenditure. Accordingly, the necessity of regular maintenance should be fully explained at the time of sale, as well as during after-sale repairs.

3-4-2. MAINTENANCE CHART

The following periodic maintenance is required to prolong the life of the machine.

Ref. No.	Parte Nama	Parts Name Hour								Ref. No			Hour										
IN P/L	Parts Hallie	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	IN P/L	Perts Name	500	1000	1500	2000	2500	3000	3500	4000	4500	5000
	Tape Transporter	•	•	•	•	•	•	•	•	•	•	2-2	Loading Belt	1			0	 			Ø		
1-19	A/C Head U	•	•	•	•	•	•	•	0	•	•	2-39	Loading Cam Gear	\top							A		
1-41	Upper Cylinder	•	0	•	0	•	0	•	0	•	0	2-1	Worm Shaft	1							×		
1-42	Cylinder U	•	•	•	•	•	•	•	0	•	•	2-3	Worm Wheel					-			×		\vdash
2-24	Supply Reel Table U								0			1-56	FE Head	•	•	•	•	•	•	•	0	•	•
2-23	Takeup Reel Tuble U								0			1-36	Mode Switch								0	-	ļ
2-8	Stator Base Unit								0			2-33	Main Cam Gear	<u> </u>							A		_
2-28	Capstan Roter U	•	•	•	●△	•	•	•	• 4	•	•	1-48	Indined (S) U								A		
1-25	Pressure Roller U	•	•	•	0	•	•	•	0	•	•	1-45	Inclined (T) U	1							•	-	\vdash
1-68	Head Cleaning U		0		0		0		0		0	1-7	Loading Motor U	†						$\neg \dagger$	0		
2-16	Main Brake (S)				0				0			1-39	P5 Arm U	_									
2-18	Main Brake (T)			 	0				0					 					-			-	

*NOTE:

Symbol	Maintenance	Requirement	Remark						
•	Cleaning	Ethyl-alcohol or Cleaning Liquid (Purchase locally)	Wipe dirt from the parts using soft cloth impregnated with Ethyl-Alcohol. Note: When cleaning rubber parts, avoid using excessive alcohol since it may accelerate deterioration of these parts. After cleaning with alcohol, wipe the alcohol quickly and thoroughly.						
0	Replacement								
Δ	Lubrication	High Quality Spindle Oil (Purchase locally)	Supply one or two drops of oil.						
A	Greasing	Molytone Grease (MOR265)	Wipe the old grease and apply new grease.						
×	Greasing	S.C.R. Grease (VFK0680)	Wipe the old grease and apply new grease.						

3-4-3. LUBRICATION PROCEDURES OF THE CAPSTAN SHAFT

- 1. Remove the Pressure Roller Unit.
- 2. Remove the Thrust Screw.
- 3. Apply two drops of the oil (VFK0131) on the top of Capstan Shaft as shown in Figure M6-A.

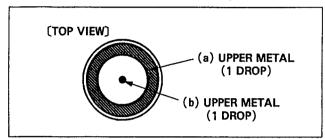


Figure M6-A

- 4. Turn the Thrust Adjustment Screw slowly to clockwise until the Capstan Rotor just starts turning (separate from the Capstan Stator).
- 5. Turn the Thrust Adjustment Screw another 180° clockwise as shown in Figure M6-B.
- 6. Install the Pressure Roller Unit.
- 7. Wipe the extra oil.

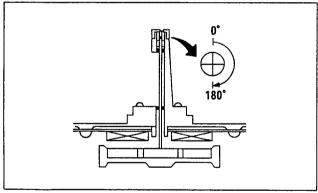


Figure M6-B

3-4-4. PROCEDURES FOR CLEANING OF THE CYLINDER UNIT

- 1. Position the Video Head to permit access for cleaning and hold the upper cylinder to keep it from turning while cleaning.
- Gently rub the Video Head in direction of tape travel with Head Cleaning Stick moistened with Cleaning.
- 3. Repeat for the other video heads (Figure M7).

Note: 1. Do not rub vertically.

2. Do not apply any pressure to heads.

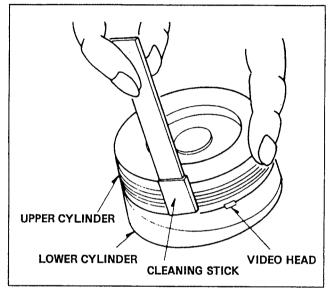
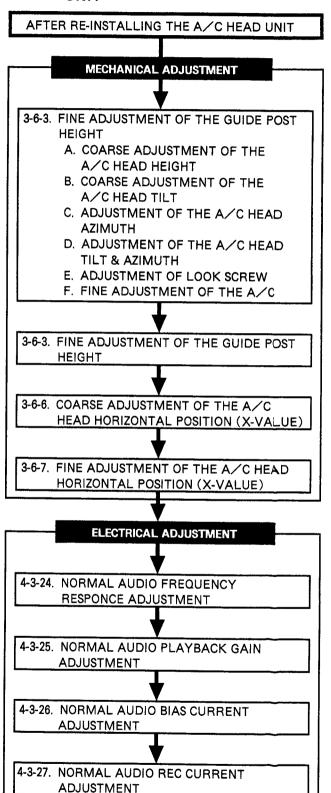


Figure M7

3-4-5. ADJUSTMENTS AFTER RE-INSTALLING THE UPPER CYLINDER, LOWER CYLINDER

AFTER RE-INSTALLING THE UPPER CYLINDER OR LOWER CYLINDER MECHANICAL ADJUSTMENT 3-6-3. FINE ADJUSTMENT OF THE GUIDE POST HEIGHT 3-6-6. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE) 3-6-7. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE) **ELECTRICAL ADJUSTMENT** 4-3-1. PG SHIFTER ADJUSTMENT 4-3-11. S-VHS RECORDING CURRENT ADJUSTMENT 4-3-12. VHS RECORDING CURRENT **ADJUSTMENT** 4-3-28. Fi-Fi AUDIO HEAD SWITCHING SHIFTER **ADJUSTMENT** 4-3-31. Hi-Fi AUDIO REC CURRENT **ADJUSTMENT**

3-4-6. ADJUSTMENTS AFTER RE-INSTALLING THE A/C HEAD UNIT



3-5. MECHANICAL PARTS REPLACEMENT PROCEDURES

3-5-1. REPLACEMENT OF THE UPPER CYLINDER UNIT

First remove two screws as shown in Figure M10-A.
 Then unsolder of the soldered portions indicated by arrows on the Upper Cylinder, and finally remove the Upper Cylinder.

Note: Soldered portion can be easily removed by using solder sucking wire, etc.

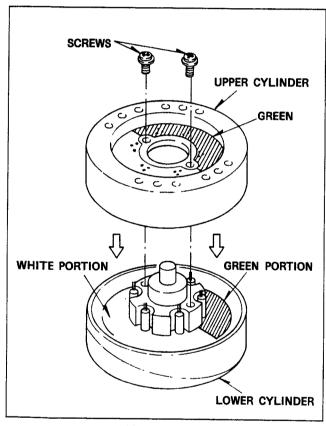


Figure M10-A

 The Upper Cylinder unit can be reinstalled by reversing the removal procedure. However, when Upper Cylinder is installed, be extremely carefully so that white portion of P.C.Board of Upper Cylinder correctly matches the white portion of bottom cylinder as shown in Figure M10-A.

Note: If the Upper Cylinder Unit is reversal installed, no color will appear when playing back pre-recorded tapes.

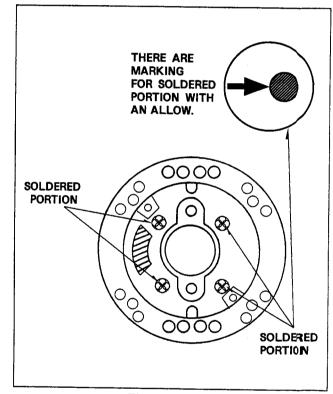


Figure M10-B

3-5-2. REPLACEMENT OF THE LOWER CYLINDER UNIT

- 1. Unscrew the 2 screws and remove the Head Amp.
- 2. Remove the Cleaning rod from bottom side.
- Unscrew 3 screws (A). Since there is very little clearance between DD Cylinder (Lower Cylinder) Unit and Chassis, remove the Cylinder gently and carefully (Figure M11).

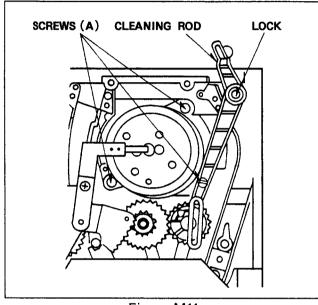


Figure M11

- Reinstall the new DD Cylinder (Lower Cylinder)
 Unit in the chassis, tighten the 3 screws (A). Then
 connect a connectors and reinstall the Cleaning
 Rod.
- 5. Re-install the Head Amp C.B.A.

Note: After reinstall the Upper Cylinder Unit should be perform Mechanical and Electrical adjustment (Refer to 3-4-5. Maintenance Procedures).

3-5-3. REPLACEMENT OF THE A/C HEAD (1) UNIT

- 1. Disconnect a connector (Figure M12).
- 2. Unscrew 3 (B)(C)(D) screws with spring and then remove the A/C Head Unit (Figure M12).

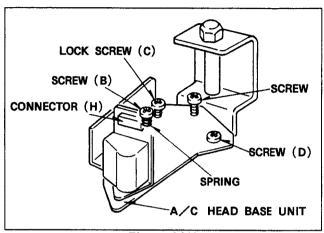


Figure M12

The A/C Head (1) Unit can be reinstalled by reversing the removal procedure.

Note: After reinstall the Upper Cylinder Unit should be perform Mechanical and Electrical adjustment (Refer to 3-4-6. Maintenance Procedures).

3-5-4. REPLACEMENT OF THE FULL ERASE HEAD

- 1. Disconnect a connector.
- 2. Unscrew a screw (E) and remove the Full Erase Head (Figure M13).

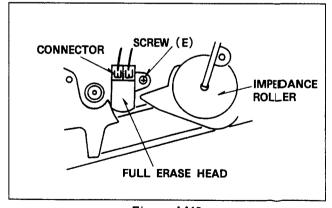


Figure M13

3. The new Full Erase Head can be reinstalled by reversing the removal procedure.

3-5-5. REPLACEMENT OF THE CAPSTAN ROTOR AND CAPSTAN STATOR

When replacing the Capstan stator unit the centre Fixing Tool must be used to fix the centre of Capstan Stator Unit.

- 1. Remove the loading belt.
- 2. Unscrew the 4 (F) screws and remove the Gear base Unit.
- Carefully lift up the capstan rotor from the capstan housing, taking care so as not loose the 2 oil seals as shown in Figure M14-A.

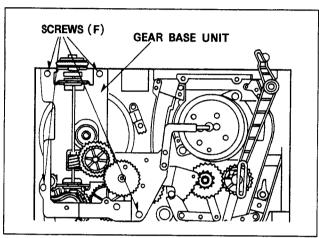


Figure M14-A

- 4. Remove the 2 oil seals.
- 5. Unscrew the 3 (G) screws and remove the Capstan Stator.
- 6. Place the capstan stator unit into position.
- 7. Loosely tighten the 3 (G) screws.
- 8. Insert the Centre Fixing Tool as shown in Figure M14-B.

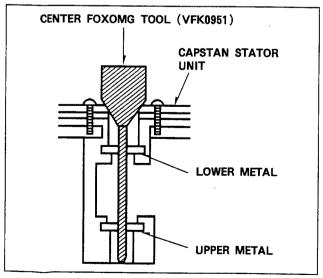


Figure M14-B

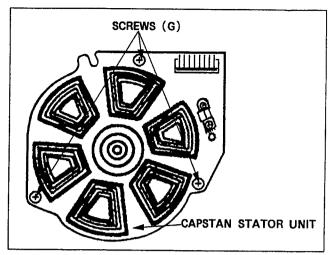


Figure M14-C

- 9. Tighten the 3 (G) screws.
- 10. Remove the centre fixing tool.
- 11. The new capstan rotor unit can be reinstalled by reversing the removal procedure.

3-5-6. REPLACEMENT OF THE CAPSTAN HOUSING UNIT

- 1. Remove the pressure Roller Unit.
- 2. Remove the Sub post spring from hook of Capstan Housing.
- Unscrew the 3 screws (H) and remove the Capstan Housing.
- 4. Remove the 2 oil seals and thrust screw.

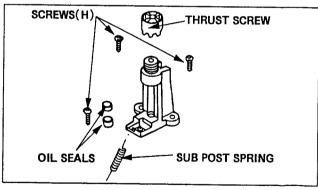


Figure M15

- Replace the new Capstan Housing, 2 oil seals and thrust screw at same time.
- 6. Re-install the Capstan Housing Unit by reversing the remove procedure.

Note: After re-installing the thrust screw adjustment of the thrust screw are required.

Replace the new Capstan Rotor, 2 oil seals and thrust screw at same time.

After re-installing the capstan rotor or capstan stator confirmation of FG out put level and adjustment of FG head gap are required.

3-5-7. REPLACEMENT OF THE INCLINED BASE (S),(T)

Supply Side

- 1. Unscrew a screw (I) and remove the head cleaning plate unit as shown in Figure M16-A.
- 2. Unscrew the 2 screws (J) and remove the post stopper.

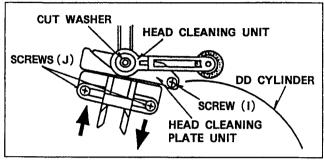


Figure M16-A

Remove the P2 post unit from loading arm (S) as shown in Figure M16-B.

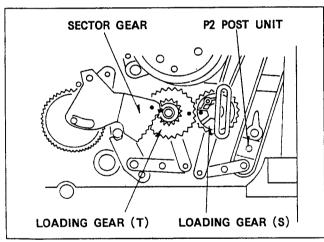


Figure M16-B

- 4. Pull out the Inclined base (S) from loading base.
- 5. The new inclined base unit can be reinstalled by reversing the removal procedure.

Note: Install post stopper pusing the arrow direction (A),(B) as shown in Figure M16-A.

After re-installing the inclined base (S) confirmation of tape interchangeability and P2, P3 posts adjustments are required.

Take-up Side

 Unscrew a screw (K) and remove the inclined base (T) as show in Figure M14.

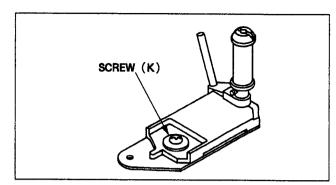


Figure M16-C

Install the inclined base (T) so that the tip of inclined base is center on the Plate Hole and then tighten screw (K).

Note: After re-installing the inclined base (T) confirmation of tape interchangeability and inclined base adjustment are required.

3-5-8. REPLACEMENT OF THE P5 POST

- 1. Remove the top cover and cassette holder.
- 2. Rotate the loading motor to clockwise, until the stop mode.
- 3. Remove the pressure roller unit.
- Remove the pinch cam (Ref. to Replacement of the mode switch) and P5 pull out sector gear as shown in Figure M17.

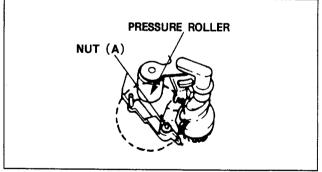


Figure M17

- 5. Unscrew a Nut (A) and Remove the P5 Post.
- The new P5 post can be reinstalled by reversing the removal procedure.

Note: After-reinstalling the P5 post confirmation of tape waving and P5 post height adjustment are required.

3-5-9. REPLACEMENT OF THE REEL UNIT

- Remove 6 screws (L) and carefully lift the DD Reel Unit.
- 2. Disconnect a connector.

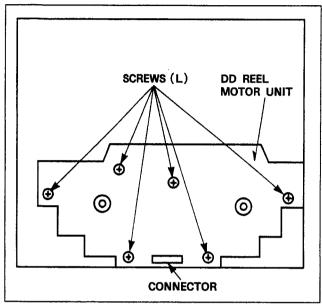


Figure M18-A

3. The Reel Motor Unit can be re-installed by reversing the removal procedure.

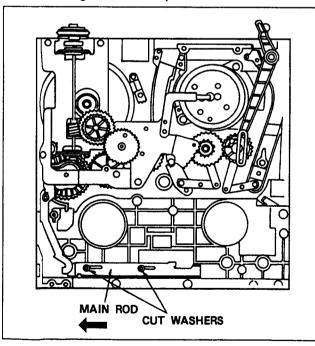


Figure M18-B

Note: When assembling the DD Reel Motor Unit, side the Main Rod to far left side by rotating a center Gear.

3-5-10. REPLACEMENT OF THE MAIN BRAKE (S),(T) UNIT

- Remove the Reel Unit (Refer to Replacement of the Reel Unit).
- 2. Remove a Retaining Ring (A).
- 3. Remove the Main Brake (S),(T) with a spring.

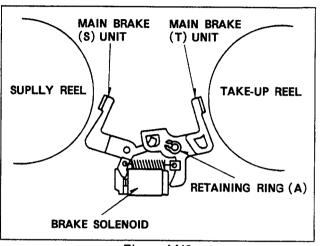


Figure M19

 The new Main Brake (S),(T) Unit can be reinstalled by reversing the removal procedure.

Note: When assembling the DD Reel Motor Unit, slide the Main Rod to far left side by rotating a Center Gear (Figure M19).

3-5-11. REPLACEMENT OF THE PRESSURE ROLLER UNIT

- 1. Place the deck in or EJECT mode.
- 2. Remove the Pinch Can Cap.
- 3. Remove the Pressure Roller Unit.

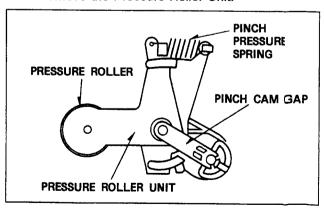


Figure M20

4. The new Pressure Roller Unit can be re-installed by reversing the removal procedure.

3-5-12. REPLACEMENT OF THE MODE SWITCH

- 1. Place the deck in the STOP mode.
- 2. Remove the Cassette Compartment Unit. (Refer to Disassembly Procedures).
- Remove the Pinch Cam Cap and Pressure Roller Unit.
- 4. Unscrew the 2 screws and remove the Head Amp.
- 5. Remove the Pinch Cam.
- Unscrew 2 screws (M) and remove the Loading Motor Base.
- 7. Unscrew a screw (N) and unsolder 5 of soldered portions.
- 8. Finally remove the Mode Switch.

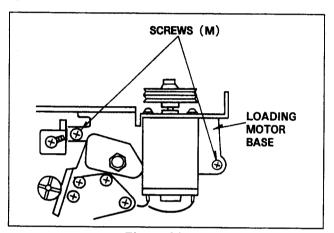


Figure M21-A

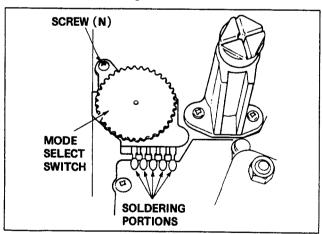


Figure M21-B

- Install a Mode Switch and tighten screw (N), then solder 5 soldering portions.
- Install the Pinch Cam and Pressure Roller Unit. (Refer to "Assembly Procedures of Pinch Cam & Pressure Roller Unit.")
- 11. Install the Loading Motor Base and tighten screw (M).
- 12. Install the Head Amp and tighten 2 screws.
- 13. Install the Cassette Compartment. (Refer to Reinstallation of Cassette Compartment.)

3-5-13. REPLACEMENT OF THE PINCH SOLENOID

- 1. Unscrew 2 screws (M) and remove the Loading Motor Base (Figure M21-A).
- 2. Unscrew 2 screws (O), Remove the Motor Pulley and Loading Motor (Figure M22-A).
- 3. Disconnect a connector (red) on the Motor Base C.B.A.
- 4. Unscrew 2 screws (P)(Figure M22-B) and remove the Pinch Solenoid.
- 5. Install the Pinch Solenoid on to the Motor Base so that the hole of the Motor Base should be the large hole of the Solenoid Base (Figure M22-C).
- 6. Tighten 2 screws (P).
- 7. Install a Loading Motor and tighten 2 screws (O).
- 8. Install the Loading Motor Base and tighten 2 screws (M)(Figure M21-A).

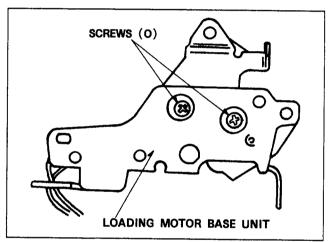


Figure M22-A

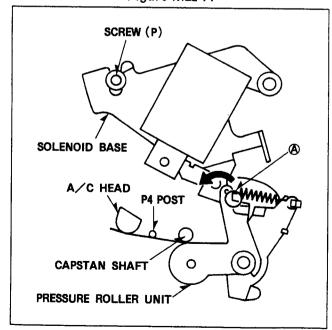


Figure M22-B

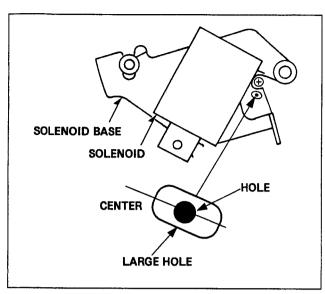


Figure M22-C

Note: Pressure Adjustment of the Pinch Roller (Refer to Mechanical Adjustment procedures) should be performed after completion of reinstalling the Pinch Solenoid.

3-5-14. REPLACEMENT OF THE HEAD CLEANING PAD

- 1. Remove a Cut Washer (N) and the Head Cleaning Pad Unit.
- 2. The Head Cleaning Pad Unit can be reinstalled by reversing the removal procedure.

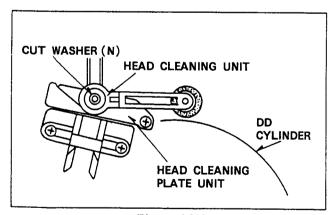


Figure M23

3-6. MECHANICAL ADJUSTMENT PROCEDURES

3-6-1. FLOW CHART OF TAPE INTERCHANGEABILITY ADJUSTMENT

AFTER RE-INSTALLING THE UPPER OR AFTER RE-INSTALLING THE INCLINED LOWER CYLINDER BASE(S) 3-6-3. FINE ADJUSTMENT OF THE TAPE 3-6-2. COARSE ADJUSTMENT OF THE P2, P3 **GUIDE POST HEIGHT** POST HEIGHTS 3-6-6. COARSE ADJUSTMENT OF THE A/C 3-6-3. FINE ADJUSTMENT OF THE TAPE **HEAD HORIZONTAL POSITION GUIDE POST HEIGHT** 3-6-7. FINE ADJUSTMENT OF THE A/C AFTER RE-INSTALLING THE INCLINED **HEAD HORIZONTAL POSITION** BASE (T) AFTER RE-INSTALLING THE A/C HEAD 3-6-2. COARSE ADJUSTMENT OF THE P2, P3 POST HEIGHTS 3-6-5. ADJUSTMENT OF THE A/C HEAD A. COARSE ADJUSTMENT OF THE 3-6-8. ADJUSTMENT OF THE INCLINED BASE A/C HEAD HEIGHT (T) B. COARSE ADJUSTMENT OF THE A/C HEAD TILT 3-6-3. FINE ADJUSTMENT OF THE TAPE C. ADJUSTMENT OF THE A/C HEAD **AZIMUTH GUIDE POST HEIGHT** D. ADJUSTMENT OF THE A/C HEAD TILT AND AZIMUTH E. ADJUSTMENT OF LOCK SCREW AFTER RE-INSTALLING THE PULL-OUT (P5) F. FINE ADJUSTMENT OF THE A/C POST **HEAD HEIGHT** 3-6-4. ADJUSTMENT OF THE PULL-OUT 3-6-3. FINE ADJUSTMENT OF THE TAPE POST (P5) HEIGHT **GUIDE POST HEIGHT** AFTER RE-INSTALLING THE P2, P3 POST 3-6-6. COARSE ADJUSTMENT OF THE A/C **HEAD HORIZONTAL POSITION** 3-6-2. COARSE ADJUSTMENT OF THE P2, P3 POST HEIGHTS 3-6-7. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION 3-6-3. FINE ADJUSTMENT OF THE TAPE

GUIDE POST HEIGHT

3-6-2. COARSE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHTS (P2 and P3)

Note:

The Tape Guide Posts have been precisely adjusted at the factory. Therefore, normally do not change the height of the P2 and P3 Posts.

To prevent the alignment tape from being damaged, use a normal cassette tape for this procedure.

<<TO0L>>

Post Adjustment Plate ; VFK0191
Reel Table Height Gauge ; VFK0190
Post Adjustment Screwdriver ; VFK0329
Check Light ; VFK0948
L Type Screwdriver ; VFK0269

- 1. Remove the cassette compartment (Refer to Disassembly Procedures).
- Place the Post Adjustment Plate over the reel tables. Confirm that the Post Adjustment Plate is firmly seated as shown in Figure M25-A.

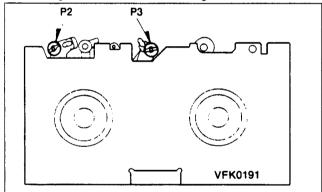


Figure M25-A

 Lower 2 tape guide posts (P2 and P3) by turning the Post Adjustment screwdriver so that the condition of post becomes as shown in Figure M25-B. That is the lower edge of Tape guide should be lower than surface of Adjustment Plate.

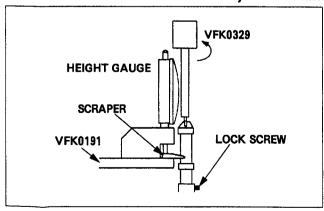


Figure M25-B

Note: Before turning P2 and P3 slightly loosen the Lock Screw using the L Type Screwdriver.

4. Place the scraper of Reel Table height Gauge as shown in Figure M25-C.

Set the gauge to zero, then raise the post slowly until the lower tape guide just touches the bottom of the scraper. Use the gauge to determine the exact point at which the lower tape guide touches the scraper.

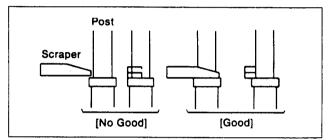


Figure M25-C

- After the adjustment, install the cassette compartment referring to Reinstallation of cassette compartment.
- Play back the beginning portion of NV-T160 cassette tape, and confirm that tape travel as shown in Figure M25-D.

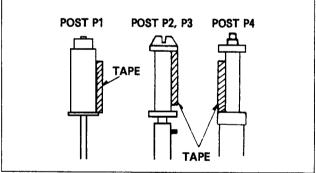


Figure M25-D

- 7. Make sure that the edges of the tape are not curling or waving at the bottom or top end of the posts P2, P3 by using the Check Light.
- If there are waving or filling at the lower or upper edge of the P2 and P3 posts, readjust the heights of P2 and P3 Posts correctly as shown in Figure M25-E.

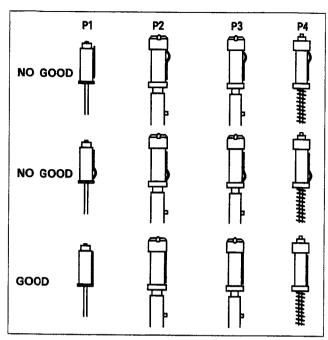


Figure M25-E

And confirm that the tape runs along the Cylinder Lead Correctly.

3-6-3. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT (P2 and P3)(LINEARITY)

<<T00L>>

Alignment Tape ; VFM8180HADH Post Adjustment Screwdriver ; VFK0329

Note: Before playing back the alignment tape playback a normal cassette tape and confirm correct transport.

- Connect the oscilloscope to the TP6 of the Video 1 C.B.A. (Video RF Envelope and the head switching pulse as a triggering signal.
- 2. Play back the 2-nd portion (Monoscope 2) of the alignment tape (VFM8180HADH).

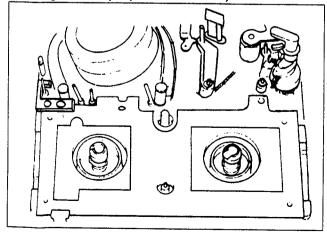


Figure M26-A

- 3. Press the tracking control button on the front panel and adjust for maximum.
- If the RF envelope appears like example A or B in Figure M26B then adjustment of the tape guide post (P2:Entrance) is necessary.
- Adjust the tape guide post (P2) with the post adjustment screwdriver so that the RF envelope wavefrom at the en trance portion becomes flat as shown in Figure M26B.

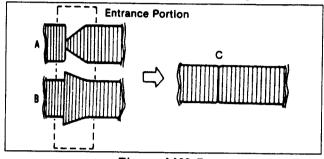


Figure M26-B

- If the RF envelope appears like example D or E in Figure M26-C, then adjustment of the tape guide post (P3:Exit) is necessary.
- Adjust the tape guide post (P3) in the same manner as the P2 post so that the exit portion becomes flat as shown in Figure M26-C.

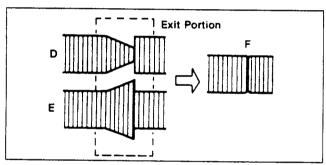


Figure M26-C

8. The output envelope should vary nearly parallel with other condition as shown in Figure M26-D.

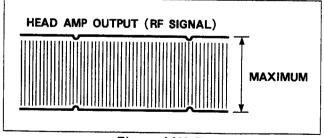


Figure M26-D

If the RF envelope does not meet these specification,

V1/V0 ≥ 0.7 V2/V0 ≥ 0.8 V3/V0 ≥ 0.7

then repeat steps 4-9 again.

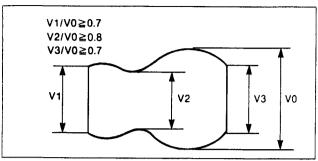


Figure M26-E

3-6-4. ADJUSTMENT OF THE PULL-OUT POST (P5) HEIGHT

<<TO0L>>

Post Adjustment ; VFK0191 Reel Table Height Gauge ; VFK0190

Nut Driver ; Purchase locally

<<SPEC>>

0.03mm ± 0.01 mm

Note: Unless the replacement or adjustment this post is required, the adjustment nut should not be turned.

 Remove the cassette compartment (Refer to Disassembly procedures).

2. Place the Post Adjustment Plate over the reel tables.

 Turn the Worm Shaft counterclockwise (loading direction) until the mechanical condition becomes as shown in Figure M27-A.

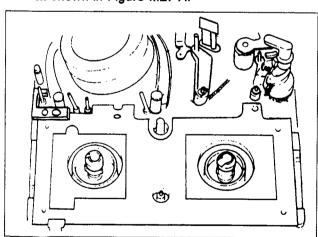


Figure M27-A

4. Place the Reel Table Height Gauge on the Post Adjustment Plate and set the gauge to zero 0 as shown in Figure M27-B.

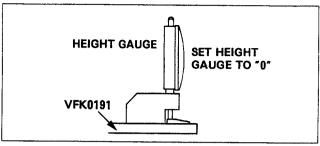


Figure M27-B

Place the Reel Table Height Gauge as shown in Figure M27-C and turn the nut slowly until the gauge reads.

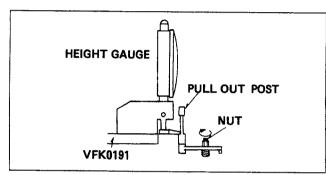


Figure M27-C

- After the adjustment, install the cassette compartment (Refer to reinstallation of Cassette Compartment).
- Play back a normal cassette tape on Review search mode, and make sure that the edges of the tape are not curling or waving at the bottom end of the P4 post by using the Check Light as shown in Figure M27-D.

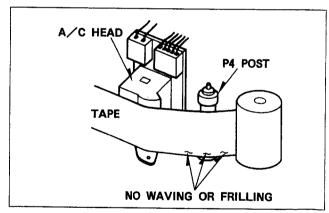


Figure M27-D

Note: There is easy method to check Waving of Filling. If there is Waving or Filling in the lower edge, the white black pattern which is reflected on the tape will curve or not linear as shown in Figure M27-E.

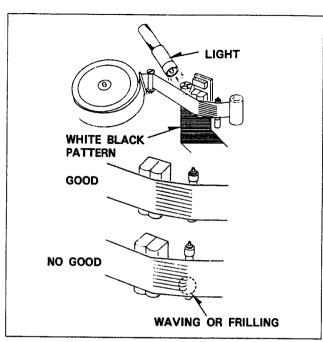


Figure M27-E

3-6-5. ADJUSTMENT OF A/C HEAD

A. COARSE ADJUSTMENT OF THE A/C HEAD HEIGHT

Note: This procedure should be performed only when the A/C Head is replaced.

<<T00L>>

Check Light: VFK0948

Nut Driver ; Purchase locally

VHS video Tape

- With the tape running, look at the lower edge of the control head by using the check light.
- Adjust the Nut (A) as shown in Figure M28-A by turning the Nut (A) clockwise to lower the head, and counterclockwise to raise it.

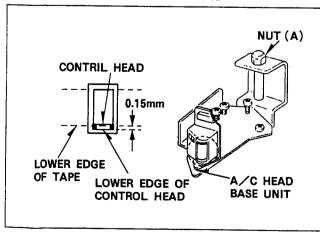


Figure M28-A

B. COARSE ADJUSTMENT OF THE A/C HEAD TILT

Note: This procedure should performed only when the A/C Head is replaced or posts heights

are readjusted.

<<TOOL>>

Alignment Tape ; VFM8180HADH Check Light ; VFK0948 Screwdriver (+) ; Purchase locally

VHS Vide Tape

 Play back a VHS video tape which the amount of tape winding of a Take up Reel, Turn a screw (B) to clockwise until waving or Filling appears in the Lower edge of P4 post as Figure M28-B.

Note: There is easy method to check waving or Filling if there is waving or Filling in the lower edge. ZEBRA pattern which is reflected on the tape will curve or not linear (Figure M27-E).

Turn the screw (B) to counter-clockwise until waving or filling do not appear in the in the lower edge of P4 post.

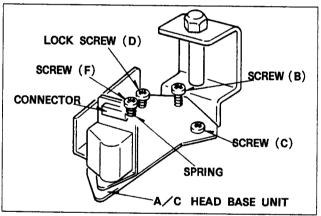


Figure M28-B

C. ADJUSTMENT OF A/C HEAD AZIMUTH

- Connect the scope CH1 to test point (Normal Audio out put CH1) and the scope CH2 to test point (Normal Audio output CH2) on the Rear Jack.
- Play back the 2-nd portion (Normal Audio 6KHz) of the alignment tape (VFM8180HADH).
- 3. Adjust the screw (C) so that these phases of both channels match as shown in Figure M28-C.

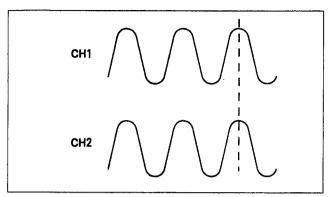


Figure M28-C

D. TILT and AZIMUTH ADJUSTMENT OF A/C HEAD

Adjust the screw (C) and (B) so that CH1 and CH2 output levels become maximum, these phase of both channels much at the same time (Figure M28-D). During this adjustment the Lock screw (D) dose not touch the A/C Head Base as shown in Figures M28-E.

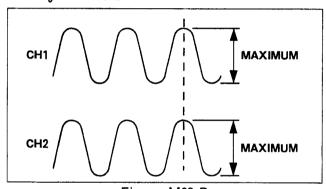


Figure M28-D

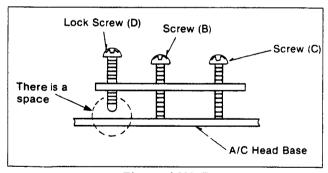


Figure M28-E

E. ADJUSTMENT OF LOCK SCREW

- Turn the screw (C) to clockwise so that the difference of phase of both channels become 180 degrees as shown in Figure M28-F.
- 2. Tighten the Lock screw (D) so that these phase of both channels match as shown in Figure M28-F.

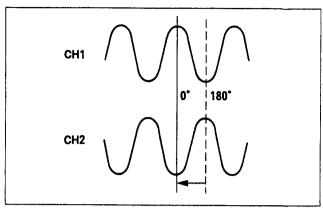


Figure M28-F

F. FINE ADJUSTMENT OF A/C HEAD HEIGHT

Note: Before this adjustment Coarse Adjustment of the A/C Head Height should be performed.

<<TOOL>>

Alignment Tape ; Nut Driver ; VFM8180HADH Purchase locally

- Connect a scope CH1 to test point (Normal Audio output CH1) and the scope CH2 to test point (Normal Audio output CH2) on the Rear Jack C.B.A.
- Play back the 2-nd portion (Normal Audio 6KHz) of the Alignment Tape (VFM8180HADH)
- Adjust the Nut (A)(Figure M28-A) so that the CH2 output level becomes maximum as shown in Figure M28-H.

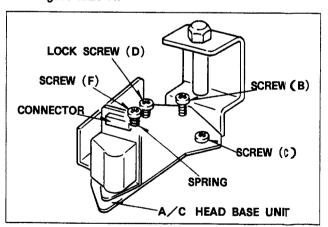


Figure M28-G

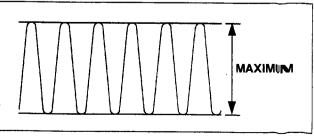


Figure M28-H

3-6-6. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

Note:

This procedure should be performed only when the A/C head is replaced, and after performing the tape interchangeability adjustment.

<<TOOL>>

H-Position Adjustment Screwdriver; VFK0328 Alignment Tape ; VFM8180HADH

- Connect a scope CH1 to Video RF Test Terminal (TP6 of the Video 1 C.B.A.) and a scope CH2 to Normal Audio CH2 output on the Rear Jack.
- Playback the 1 position (Monoscope 1 and Audio/Every 10-the field is skipped) of the Alignment tape VFM8180HADH.
- Adjust the A/C head horizontal position screw so that the phase of audio drop out and video RF envelope drop-out becomes the same as shown in Figure M29

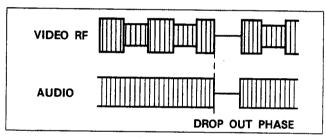


Figure M29

Note:

After completion the fine adjustment of the A/C head horizontal position, the phase of Audio drop-out and Video RF envelope dropout may be changed slightly.

3-6-7. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

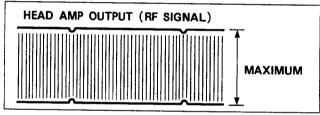
Note:

This procedure should be performed only when the A/C head is replaced, and after performing the tape interchangeability adjustment.

<<TOOL>>

H-Position Adjustment Screwdriver ; VFK0328 Alignment Tape ; VFM8180HADH

- 1. Press the tracking control button "+" and "-" at same time to the center position.
- 2. Connect a oscilloscope to Video RF test Terminal.
- Play back the 2-nd portion (Monoscope 2) of the alignment tape (VFM8180HADH).
- Adjust the Horizontal Position Screw (Figure M29) of A/C head so that the RF signal becomes maximum level as shown in Figure M30.



Fiugre M30

3-6-8. ADJUSTMENT OF INCLINED BASE (T)

<<TOOL>>

Check Light ;
Screwdriver (+) ;

VFM0948 Purchase

VHS Video Tape

 Play back the beginning portion of 180 minute normal cassette tape and confirm that waving or filling of P3 post is as shown in Figure M31-A

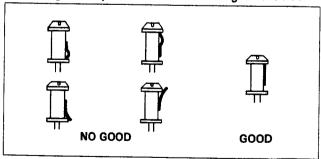


Figure M31-A

 If there are waving at the lower and upper edge of the P3 post, Adjustment the inclined base of P3 post as shown in Figure M31-B.

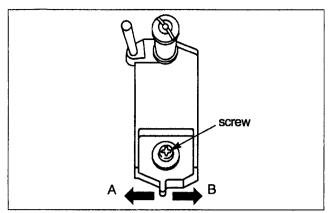


Figure M31-B

[When the inclined base is adjust to an arrow direction (B) tape becomes to lower edge.]

- Confirm that tape position P3 post is upper edge and then tighten screw as shown in Figure M31-B.
- Confirm that waving is occurred between upper side of P3 post and A/C head. If there is waving adjust the step 2.

Note: After adjust inclined base tapeinterchangeability and A/C head adjustment must be required.

3-6-9. ADJUSTMENT OF THRUST GAP

- Turn the thrust adjustment screw clockwise to until the capstan rotor just separate from the capstan stator whit rotating the capstan rotor by hand.
- 2. Turn the thrust adjustment screw clockwise to 180 degrees from paint at step 1.
- 3. Set the 2 oil seal to edge of the capstan housing as shown in Figure M32.

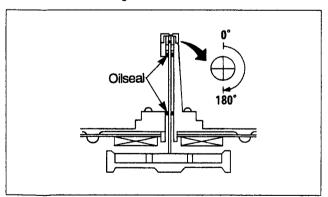


Figure M32

3-6-10. ADJUSTMENT OF FG GAP

<<TO0L>>

Fine Adj. screwdriver : VFK0330 Screwdriver : Porchase loclly

<<SPEC>> 0.16mm ± 0.04mm

- Loosen screw (Q) and set the Fine Adjustment screw driver n the hole on the Capstan Stator Unit.
- Adjust the gap between FG head and the Capstan Stator unit.
- 3. After adjustment tighten a screw (Q).

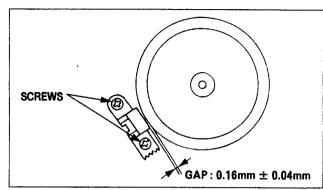


Figure M33-A

Note: After adjust FG head gap, FG output level confirmation must be required.

Do not touch the surface of rotor and keep

any magnetizable material away.

CONFIRMATION OF FG OUTPUT LEVEL

- Connect a oscilloscope to TP8009 (CAP FG output) on the Video 3 C.B.A.
- Confirm that FG output level is within specification during PLAY/REC or PLAY mode.
- If FG output level is out of specification.
 Readjust the step 1 ~ 3 of FG GAP Adjustment.

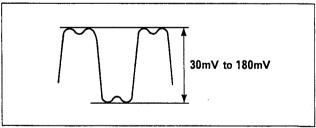


Figure M33-B

3-6-11. MEASUREMENT AND ADJUSTMENT OF BACK TENSION

<<T00L>>

Back Tension Meter: VFK0132

VHS Cassette Tape(120min. tape except S-VHS tape)

A. FWD TENSION ADJUSTMENT

<<SPEC>>
23g ~ 27g

- 1. Play back the cassette tape from the beginning and wait until the tape movement get the stabilization (for approx. 10 to 20 seconds).
- Pull the Impedance Roller in the direction indicated the arrow in Figure M34-A secure it with a piece of adhesive tape.
- Insert the Back Tension Meter into the path of a tape, and measure the back tension.

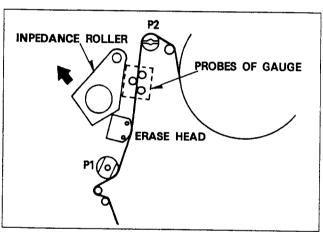


Figure M34-A Measurement of Back Tension

4. If it is out of specification, replace the Tension spring.

B. REV TENSION ADJUSTMENT

<**SPEC**>> 30g ~ 60g

- Play back the cassette tape on SP Reverse Play mode from the beginning and wait until the tape movement get the stabilization (for approx. 10 to 20 seconds).
- 2. Pull the Impedance Roller in the direction indicated by the arrow in Figure M34-B secure it with a piece of adhesive tape.
- 3. Insert the Back Tension Meter into the path of a tape, and measure the back tension.
- 4. If it is out of specification, replace the Tension spring.

Note: While measuring, make sure that the three probes of the meter are all in good contact with the tape.

As the tension meter is very sensitive, we recommend taking 3 separate readings.

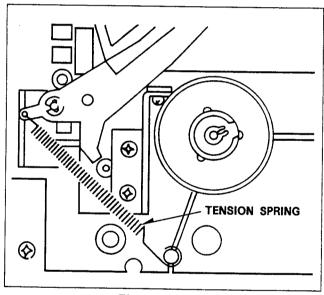


Figure M34-B

3-6-12. HEIGHT ADJUSTMENT OF THE REEL TABLES

<<TO0L>>

Post Adjustment Plate ; Reel Table Height Gauge ;

VFK0191

VFK0190

<<SPEC>> 0 - 0.15mm

1. Remove the cassette compartment.

2. Place the post Adjustment Plate on the reel tables.

3. Place the Reel Table Height Gauge on the plate so that the scraper of the gauge touches the cutout portion of the plate, then set the gauge to zero 0 as shown in Figure M35-A.

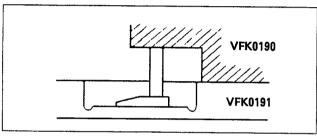


Figure M35-A

4. Measure the height of the top surface of either Reel table and note the difference in height from the plate cut-out (Figure M35-A and M35-B). Repeat this procedures for the other Reel Table.

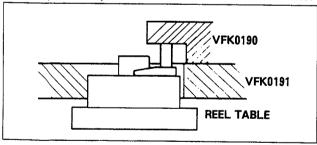


Figure M35-B

5. If the difference of Supply Reel table is more than 0.15mm higher or lower, replace the Supply Reel table. When the difference of Take Up Reel table is more than 0.15mm higher or lower, adjust nut (A)(Figure M35-C) so that measurement becomes the spec. If you can not adjust to the spec., replace Take Up Reel table.

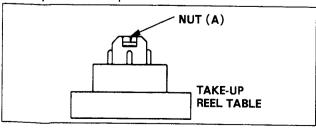


Figure M35-C

Note: When replacing the tables, the DD Reel Unit needs to be removed from the chassis. Remove 6 screws and carefully lift it out as shown in Figure M35-D.

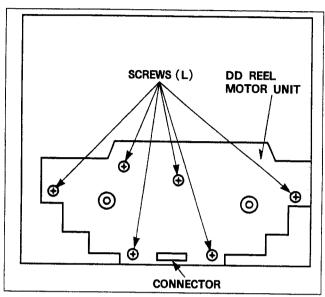


Figure M35-D Bottom View of DD Reel Unit

Note: When assembling the DD Reel Unit, slide a Main Rod to far left side by rotating the Center Gear, and then screw the 6 screws.

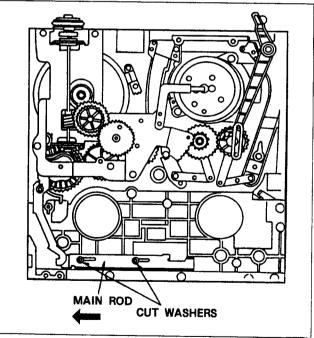


Figure M35-E

3-6-13. MEASUREMENT AND ADJUSTMENT OF THE BRAKE TORQUE

<<T00L>>

Torque Gauge ; VFK0133 Adaptor for Gauge ; VFK0134

- Remove the top cover and the cassette compartment.
- Attach the adapter to the torque gauge and place the deck in STOP mode (Sub loading mode).
- Place the torque gauge on the reel table as shown in Figure M36-A. The weight of the gauge should not rest on the reel table.
- Turn the torque gauge in the direction indicated in Figure M36-B until the brake begins slipping and read the gauge.

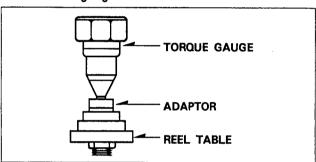


Figure M36-A Measuring Method

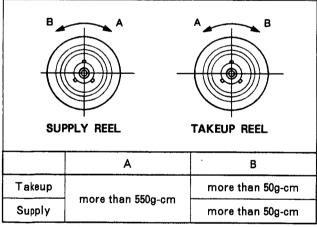


Figure M36-B Specification of Btake Torque

5. If it is out of specification, replace the Brake Spring.

Note: If the proper brake torque cannot be obtained by replacing the Brake Spring, clean the braking surface of the reel table with a soft cloth and re-measure the brake torque. If its still out of specification, replace the Main Brake (S) or (T) Unit.

3-6-14. PRESSING FORCE CONFIRMATION OF PRESSURE ROLLER UNIT

<<TOOL>>

Fan Type Tension Gauge; VFK66

VHS 120min, Cassette Tape

<<SPEC>>

1050g ± 230g

- Remove the Cassette Compartment.
- 2. Play back the end portion of VHS (180min.) tape.
- 3. Set the Fan Type Tension Gauge to the part (A) of Pinch Roller Unit.
- 4. Press the Arm with the Gauge, in the direction indicated by the arrow as show in Figure M37.
- 5. Adjust the Solenoid Base so that the reading of the Tension Gauge is $1050g \pm 230g$ at the moment of the tape running stop.
- 6. If it is out of specification, replace the Tension spring.

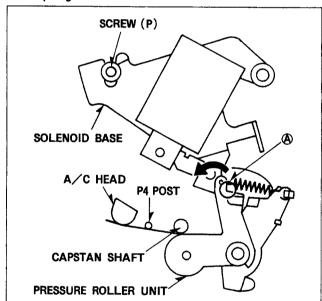


Figure M37

3-6-15. ADJUSTMENT OF REV TENSION SENSOR POSITION

<<TOOL>>

Tension Sensor Adj. Fixture ; VFK0806 Tension Post Adj. Plate ; VFK0236 Fine Adj. Screwdriver ; VFK0330

Digital Volt Meter ; Purchase locally

<<**SPEC>>**2.3V ~ 2.7V

Note: Assemble a Tension Sensor Adjustment

Fixture (VFK0806) and a Tension Post Adj. Plate (VFK0236) as shown in Figure M38-A.

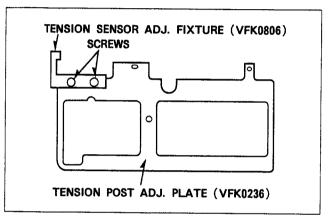


Figure M38-A

- Remove the Top Plate and Cassette Holder Unit. (refer to Disassemble Procedures)
- 2. Disconnect the 4pin and 2pin flat wire to the pin3 and 4 of the connector P1508.
- 3. Connect two wires of 4pin flat wire to the pin3and 4 of the connector P1508.
- 4. Push the Sub Wiper Arm (R) to direction of Cassette loading.
 - Then the Sub Wiper Arm (R) goes down it self and mode of machine change to STOP.
- 5. Turn the Power switch off.
- 6. Remove the Cassette Compartment (refer to Disassembly Procedures).
- Connect the V.T.V.M. of D.V.M. to TP8008 on the Video 3 C.B.A.
- Place the Tension Post Position Adjustment Plate with the Fixture over the reel tables as shown in Figure M38-B.

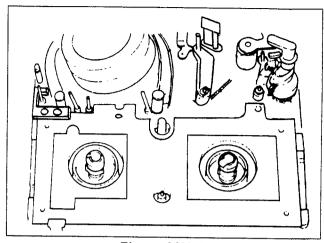


Figure M38-B

- 9. Turn the Power switch on.
- Slightly loosen 2 screws (C). Insert a Fine Adj. Screwdriver in the hole (D)(Figure M38-C).

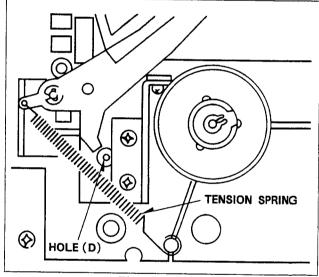


Figure M38-C

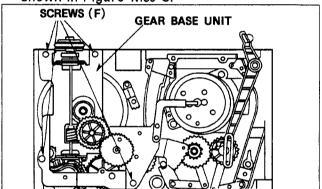
- 11. Press the PLAY button.
- 12. Adjust the Rev Sensor Position so that measurement becomes D.C. 2.3V ~ 2.7V.
- 13. Tighten the 2 Screws (C).
- 14. Remove the Tension Sensor Fixture.
- 15. Reinstall the Cassette Compartment.
- 16. Confirm Playback picture (Rev Playback mode, Playback mode etc.)

3-7. ASSEMBLY AND ADJUSTMENT PROCEDURES OF MECHANISM

The mechanism of this model is mostly engaged to the System Control Circuit, through the mode select switch. Therefore the relation between the mode select switch and the cam gear decides all further mechanical movement of the mechanical parts such as levers, gears, rollers and so on. If these parts are not fixed properly, the unit will be unloaded or compulsorily stopped. And it will result being damaged at any mechanical or electrical parts. The overall mechanical condition (alignment) of bottom and top view are shown in Figure M39-A and Figure M39-B. This mechanical adjustment is performed in the STOP mode.

3-7-1. CONFIRMATION OF ALIGNMENT CONDITION

- 1. Remove the Loading Belt.
- 2. Unscrew 4 screws (F) and remove the Gear Base Unit. (Figure M39-A)
- 3. Turn the Center Gear to counter-clockwise until 2 big holes of Center Gear align with 2 big holes of Retainer Gear and Ring Gear and Chassis as shown in Figure M39-C.



Fiugre M39-A

- 4. Identification hole on the Mode Select Switch at 6 oclock position and aligned with small hole on Pinch Cam as shown in Figure M39-B.
- 5. P5 Arm is completely loading position and the Inclined Base (S) and (T) are completely unloading position.
- Small hole on Sub Cam Gear should align with small hole on the Connection Gear and rectangular mark on the Connection Gear should be at a 3 oclock position.
- 7. Pressure Roller Unit is UP position.

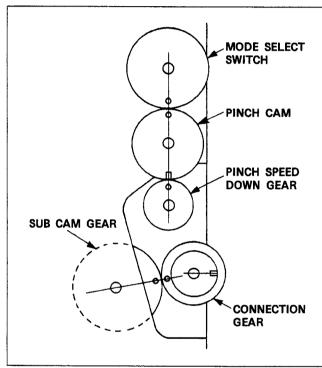


Figure M39-B Top View of Overall IQ-Mechanical Condition

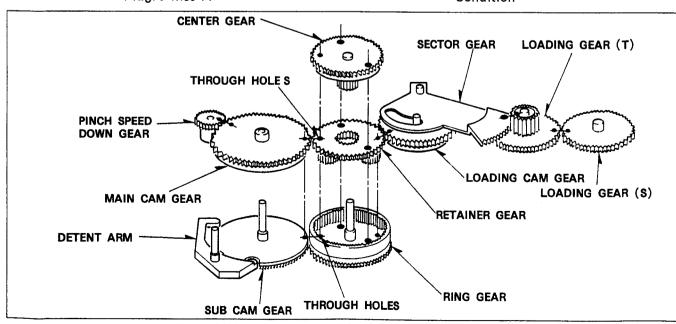


Figure M39-C Bottom View of Overall Mechanical Condition

3-7-2. ASSEMBLY PROCEDURES OF SUB CAM GEAR RING GEAR AND DETENT ARM

- 1. Install the Ring Gear so that the two holes on the Ring Gear align with the two holes on the chassis as shown in Figure M40.
- 2. Install the Sub Cam Gear so that the large hole on Sub Cam Gear aligns with the hole on chassis.
 - Also the small hole (located just outside of large hole) on Sub Cam Gear should align with the hole on Ring Gear as shown in Figure M40.
- 3. Confirm that the small hole on Sub Cam Gear is aligned with the small hole on Connection Gear as shown in Figure M39-B (In case of the Connection Gear is already installed).
- 4. Install the Detent Arm and make sure Detent Arm seats perfectly in detent of Sub Cam Gear as shown in Figure M40.

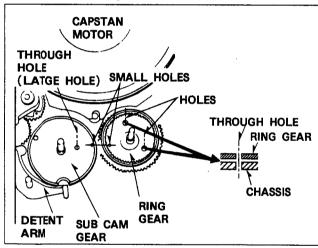


Figure M40

3-7-3. ASSEMBLY PROCEDURES OF MAIN CAM GEAR AND PINCH SPEED DOWN GEAR

- Install the Main Cam Gear on to the Sub Cam Gear so that the small hole on the Main Cam Gear aligns with small hole on the Ring Gear as shown in Figure M41.
- 2. Insert a retaining ring.
- Install the Pinch Speed Down Gear from top side of chassis so that the small hole on the Main Cam Gear as shown in Figure M41.

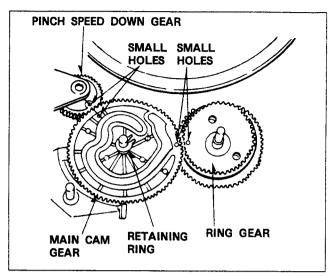


Figure M41

3-7-4. ASSEMBLY PROCEDURES OF LOADING CAM GEAR AND RETAINER GEAR

- Install the Retainer Gear onto the Ring Gear so that the two holes on the Retainer Gear align with the two holes on the Ring Gear, at this time, small hole on the Main Cam Gear should aligns with small hole on the Retainer Gear as shown in Figure M42.
- Install the Loading Cam Gear so that the small hole which is directly outside of the large hole on the Loading Cam Gear is aligned with the outside hole of the Retainer Gear as shown in Figure M42.

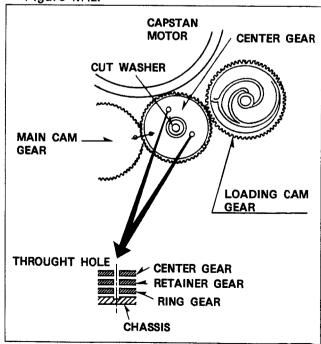
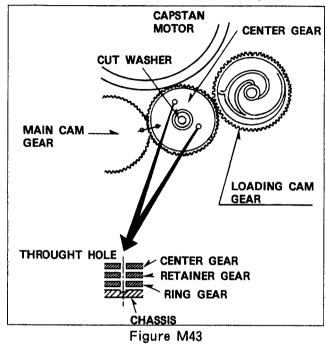


Figure M42

3-7-5. ASSEMBLY PROCEDURES OF CENTER GEAR

 Softly Install the Center Gear onto the Retainer Gear so that the two holes in the Center Gear align with the holes on the Retainer Gear, then install the cut washer as shown in Figure M43.



3-7-6. ASSEMBLY PROCEDURES OF MAIN LEVER AND CAM FOLLOWER ARM UNIT

- 1. Install the Main Rod and then insert the cut washers as shown in Figure M44.
- 2. Install the Cam Follower Arm so that the pin of the Cam Follower Arm inserts into the groove of the Main Cam Gear and also inserts into the slot on the Main Rod, insert the retaining ring.

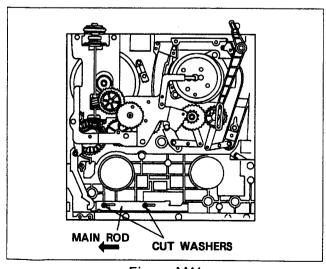


Figure M44

3-7-7. ASSEMBLY PROCEDURES OF LOADING GEAR (T), LOADING GEAR (S) SECTOR GEAR

- Set the P2 and P3 posts to fully unloaded position, then install the Loading Gear (T) and (S) so that the outer hole on the Loading Gear (T) aligns with the outer hole on the Loading Gear (S) as shown in Figure M45-A.
- 2. Install the Sector Gear so that the outer hole in the Sector Gear aligns with the projection mark on Loading Gear (T).
- 3. Insert 3 retaining rings as shown in Figure M45-B.

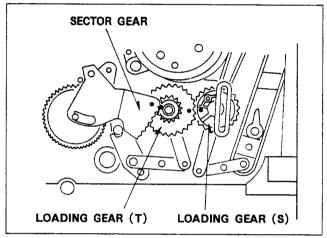


Figure M45-A

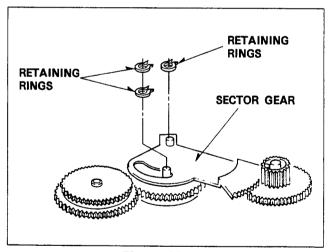


Figure M45-B

3-7-8. ASSEMBLY PROCEDURES OF CONNECTION GEAR

Note: Before assembling, Sub Cam Gear position (and positions of bottom side gears) must be correct as described before (Figure M39-B).

 Install the Connection Gear so that the small hole on the Connection Gear aligns with the small hole on the Sub Cam Gear as shown in Figure M46.

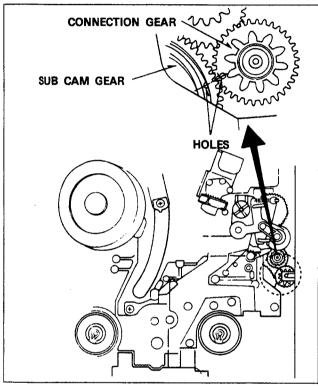


Figure M46

3-7-9. ASSEMBLY PROCEDURES OF MODE SWITCH AND P5 PULL OUT SECTOR GEAR

- 1. Turn the Center Gear to unloading position.
- 2. Install the mode Select Switch and tighten the mounting screw, then solder the 5 soldering portions.
- Install the P5 Pull Out Sector Gear so that the hole of P5 Pull Out Sector Gear aligns with the tip of gear at P5 Arm as shown in Figure M47.

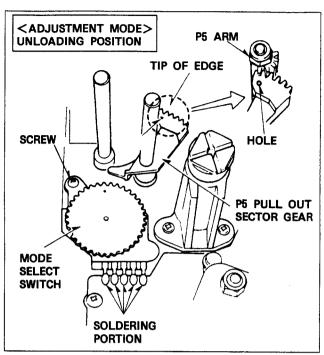


Figure M47

3-7-10. ASSEMBLY PROCEDURES OF PINCH CAM AND PRESSURE ROLLER UNIT

- Install the Pinch Cam while pushing the P5 post forward. The gear of the Pinch Cam should drop to a seated position. In this position make sure hole in the Mode Select Switch aligns with small hole on the Pinch Cam, also the small rift on the Pinch Cam should align with the hole on the Pinch Speed Down Gear sa shown in Figure M48.
- 2. Install the Pressure Roller Unit. Make sure the seats perfectly onto the Pinch Cam, then install the Pinch Cam Cap.

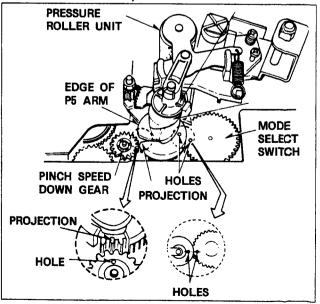


Figure M48

3-7-11. ASSEMBLY PROCEDURES OF GEAR BASE UNIT

Install the Gear Base Unit and screw 4 screws
 (F) as shown in Figure M49.

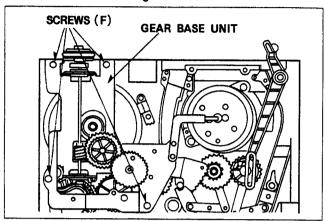


Figure M49

Note: The Gear Base Unit has 2 gears and worm shaft. There is no adjustment for these gears.

3-6-12. REINSTALLATION OF CASSETTE COMPARTMENT

When you reinstall the cassette compartment, the position adjustment of mechanism is necessary for correct operation, as follows.

A. Confirmation of STOP Alignment Condition

- Turn the Worm shaft counter-clockwise or clockwise until mechanism is placed into the Alignment Condition as following conditions.
 - a) Identification hole on the Mode Select Switch at 6 oclock position and aligned with small hole on Pinch Cam. (Figure M48)
 - b) P5 Arm is completely loading position and the Inclined Base (S) and (T) are completely unloading position.
 - c) Small hole on Sub Cam Gear should align with small hole on the Connection Gear (Figure M46) and rectangular mark on the Connection Gear should be at a 3 oclock position.
 - d) Pressure Roller Unit is UP position.

B. Confirmation of Cassette Compartment

 Confirm that the Cassette Compartment is aligned properly. In the EJECT position (Cassette Holder up and advanced to the front) the two V-shaped marks on the slide switch should align. The slide switch is located on the right side of the Cassette Assembly towards the rear as shown in Figure M50A.

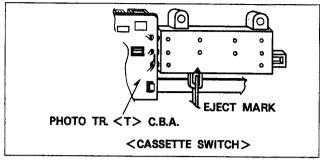


Figure M50-A

- 2. Remove 3 screws (A) as shown in Figure M50-B.
- 3. Take the top plate out.
- 4. Take the cassette Holder unit out as shown in Figure M50-C.

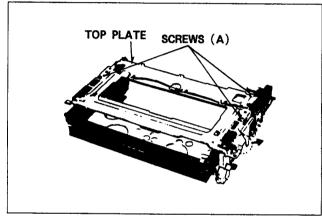


Figure M50-B

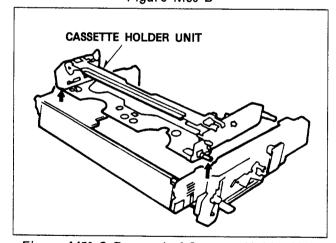


Figure M50-C Removal of Cassette Holder Unit

5. Press the sub wiper arm (R) to direction indicated by arrow so that the sub wiper arm (R) comes to cassette down position (STOP) completely as shown in Figure M50-D and keepit. In this position, the arrow on the Sub Wiper Arm (R) should align with the arrow on the Rack (A)(1) Unit as shown in Figure M50-E.

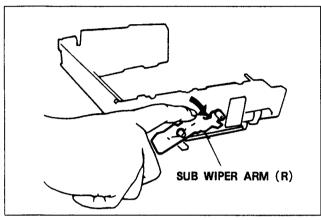


Figure M50-D

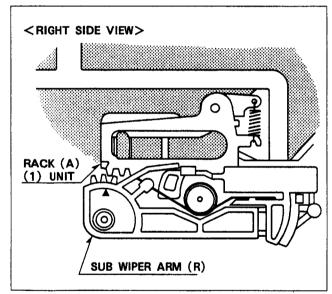


Figure M50-E

6. If the Cassette Compartment is not aligned, realignment may be accomplished by pushing the Main Shaft Unit to the right (gently) and pushing the front of the Rack Unit to the left. This procedure will disengage the teeth of the Rack Gear from the teeth on Sub Wiper Arm assembly.

This will allow you to change the positional relationship between the Sub Wiper Arm Assembly and Rack Unit. This procedure is best attempted in the EJECT position. Once this is done, check for smooth operation of the compartment by inserting a cassette, and pushing in, and down.

C. Installation Procedure

- 1. Bring loading mechanism to the STOP (Subload) position.
- Confirm that the chassis is aligned properly for Alignment Condition as shown in Figure M39-B and M39-C.
- 3. Put the Sub Wiper Arm (R) in its full down position (Sub Wiper Arm should rest on plastic protrusion on the bottom of the right side plate).
- 4. Install the cassette compartment (without cassette holder) to chassis so that the rectangular marking (or slot) on the connection gear should be line up with first tooth of the Rack Gear as shown in Figure M50-F and M50-G.

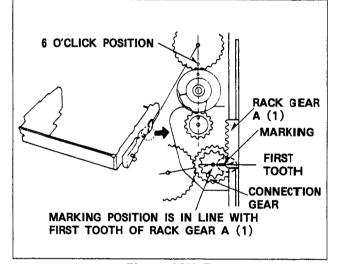


Figure M50-F

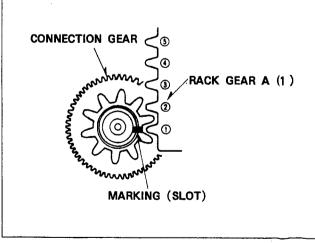


Figure M50-G

5. Tighten the 4 screws (D) as shown in Figure M50-H.

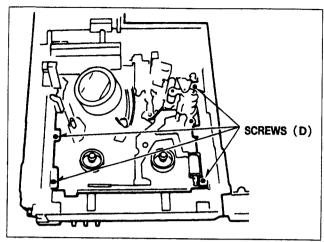


Figure M50-H

- 6. Manually move the loading mechanism toward the EJECT position.
- 7. Stop the manual eject procedure just before completion, so that the Sub Wiper Arms straight up. This position is also characterized by the channel guides (in the Wiper Arms) being directly under the cut outs on the top of the Cassette Compartment base (Figure M50-1).
- 8. Install the Cassette Holder Unit in the Cassette Compartment Base. The Cassette holder should drop into place if the Sub Wiper Arms are portioned as called for in step 7.

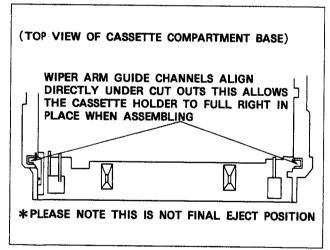


Figure M50-I

Note: For proper front loading, the guide pin on the opener lever should follow the upper track of the right side panel as shown in Figure M50-J.

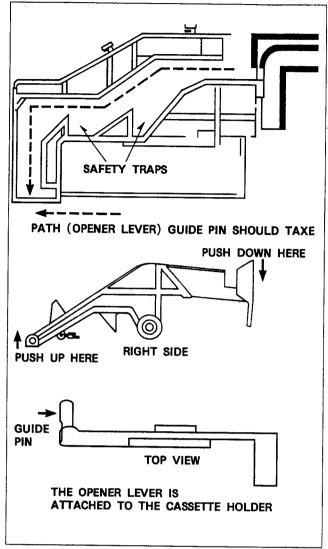


Figure M50-J Right Side Plate

- Install the top plate on the Cassette Compartment Base and tighten the 3 screws (A) as shown in Figure M50-B.
- 10. Manually confirm that front loading and main loading run smoothly. Also confirm EJECT before power is applied.

SECTION 4

ELECTRICAL ADJUSTMENTS

CONTENTS

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4-3		TRICAL ADJUSTMENT PROCEDURES	
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	4-3-2	Slow Free Run Adj	
	4-3-3	Slow Tracking Adj	
	4-3-4	V-Lock Adj	
	4-3-5	Auto Tracking Gain Adj	
	4-3-6	DOC Balance Adj	
	4-3-7	CNR Adj	
	4-3-8	Character Position Adj	
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	4-3-23	Pre-Amplifier Adj	
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	4-3-28	Normal Audio REC Current Adj	
	4-3-29	Hi-Fi Audio Head Switching Shifter Adj	
	4-3-30	Hi-Fi Audio Carrier Frequency Adj	
	4-3-31	Hi-Fi Audio Deviation Adj	
	4-3-32	Hi-Fi Audio Current Adj	

4-1. TEST & SERVICE EQUIPMENT

To perform the electrical adjustment completely the following equipments are required.

1. VTVM (Vacuum Tube Volt Meter)

Capacity: 0.001 to 50V

2. DVM (Digital Volt Meter)
Capacity: 0.001 to 50V

3. Dual-Trace Oscilloscope (with probes)

Capacity: 0.005 to 50V/div, DC to 30MHz

4. Frequency Counter

Capacity: 0 to 10MHz

5. Sine Wave Signal Generator (RC Oscillator)

Capacity: 0 to 10MHz

6. Video Signal Generator (Composite)

7. Spectrum analyzer

8. Color Monitor TV

9. Waveform Monitor

10. Alignment Tape (VFM8080HQFP)

4-2. HOW TO READ THE ADJUSTMENT PROCEDURE TABLE

BOARD	MAIN C.B.A,
TP	TP3502 [F-2]
ADJ	VR2002 [A-3]
TAPE	ALIGNMENT TAPE
INPUT	COLOUR BAR
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	T = 8.5 ± 0.5H

BOARD: Adjustment position of Print Circuit Board.
TP: Connection point (Test Roint) of

TP: Connection point (Test Point) o

measuring equipment

*() shown TP location on the board.

ADJ.: Adjustment component

*() shown VR location on the board.

TAPE: Tape for adjustment.

INPUT: Supply a signal for adjustment.

MODE: Mode of VTR.

Example: REC → PLAY is recording

signal and playback the portion just recorded.

M.EQ: Measuring equipment.

SPEC: Specification for adjustment.

4-3. ELECTRICAL ADJUSTMENT PROCEDURES

4-3-1. PG SHIFTER ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A.
TP	TP8002(HEAD SW)(A-1), VIDEO OUT
ADJ	VR2002(A-4)
TAPE	VFM8180HADH PORTION: 2
INPUT	
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	T = 8.5 ± 0.5H

Note: This adjustment should be performed only after completion of the Tape Interchangeability adjustment.

- 1. Playback the alignment tape at the portion 2.
- Connect the oscilloscope to TP8002 for CH1 and Video Out for CH2.
- 3. Adjust VR2002 so that the falling edge of switching pulse becomes $8.5 \pm 0.5H$ before the V-sync portion as shown in Figure E1.

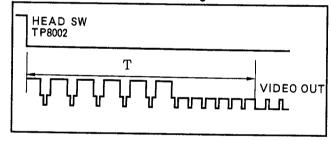


Figure E1

4-3-2. SLOW FREE RUN ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A.
TP	TP8009(A-1)
ADJ	VR2001 (A-4)
TAPE	VFM8180HADH, PORTION: 2
INPUT	
MODE	PLAY PAUSE
M.EQ	FREQUENCY COUNTER
SPEC	455Hz ± 5Hz

- 1. Playback the alignment tape at the portion 2.
- 2. Connect a jumper wire between TP8006 and GND on the Video 3 C.B.A.
- 3. Connect the frequency counter to TP8009 on the Video 3 C.B.A.
- 4. Adjust VR2001 so that the reading of frequency counter is f = 455Hz ± 5Hz.
- After this adjustment remove the jumper wire from TP8006 and GND.

4-3-3. SLOW TRACKING ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A.
TP	VIDEO OUT
ADJ	FWD: VR2005(A-3), REV: VR2006(A-3)
TAPE	COLOUR BAR SIGNAL RECORDED TAPE
INPUT	
MODE	SLOW PLAY BACK
M.EQ	MONITOR TV
SPEC	NO NOISE BAR

Note:

This adjustment should be performed only after completion of 4-3-2. SLOW FREE RUN

adj.

- 1. Record the colour bar signal for a few minutes.
- 2. Playback the recorded portion in still mode.
- 3. Push the tracking button "+" and "-" at same time.
- 4. Adjust VR2005 and VR2006 so that the noise bar dose not appear and lower on the monitor TV.

4-3-4. V-LOCK ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A.
TP	VIDEO OUT
ADJ	VR2004(A-3)
TAPE	BLANK TAPE
INPUT	COLOUR BAR
MODE	STILL
M.EQ	MONITOR TV
SPEC	NO V-DANCING

Note:

This adjustment should be performed only after completion of 4-3-3. SLOW TRACKING Adj.

- 1. Record the colour bar signal for a few minutes.
- 2. Playback the recorded portion in still mode.
- Adjust VR2004 so that the V-dancing dose not appear and lower on the monitor TV.

4-3-5. AUTO TRACKING GAIN ADJ.

BOARD	VIDEO 1 C.B.A.
TP	TP3005(D-3)
ADJ	VR3005(C-2)
TAPE	
INPUT	SINE WAVE (4MHz, 200mVp-p)
MODE	E-E
M.EQ	OSCILLOSCOPE
SPEC	2.5V ± 0.1V

[SET UP]

S-VHS: OFF INPUT: LINE

- 1. Set the sinewave generator output to 4MHz, 200mVp-p.
- 2. Supply the sinewave signal to TP3006.
- 3. Connect the oscilloscope to TP3005.
- 4. Adjust VR3005 so that the level is $2.5V \pm 0.1V$.

4-3-6. DOC BALANCE ADJ.

BOARD	VIDEO 1
TP	TP3001(B-1)
ADJ	VR3001(E-1)
TAPE	
INPUT	COLOUR BAR SIGNAL
MODE	E-E
M.EQ	OSCILLOSCOPE
SPEC	LESS THAN 50mVp-p

- 1. Supply the colour bar signal to video input.
- 2. Connect the oscilloscope to TP3001.
- 3. Adjust VR3001 so that the video level becomes minimum as much as possible (Figure E2).

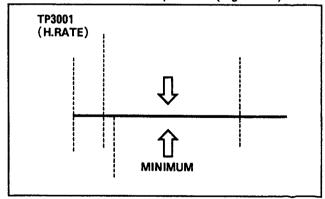


Figure E2

4-3-7. CNR ADJ.

BOARD	VIDEO 1 C.B.A.
TP	T3804(A-1)
ADJ	VR3803(A-1), VR3806(A-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOUR BAR SIGNAL
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	C LEVEL - MINIMUM

Note: This adjustment should be always completed after 4-3-6. DOC BALANCE adi.

[SET UP]

S-VHS SW = ON

- Record the colour bar signal a few minutes by the S-VHS mode.
- 2. Connect the oscilloscope to TP3804.
- 3. Playback the just recorded portion.
- 4. Adjust VR3803 and VR3806 mutually so that chroma signal becomes minimum as possible.

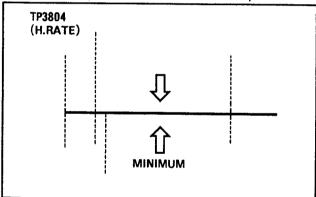


Figure E3

4-3-8. CHARACTER POSITION ADJ.

BOARD	VIDEO 2 C.B.A.
TP	VIDEO OUT
ADJ	C3111 (B-1)
TAPE	
INPUT	COLOUR BAR SIGNAL
MODE	E-E
M.EQ	MONITOR
SPEC	SEE FIGURE

- 1. Supply a colour bar signal to the video input.
- Set the MENU Switch to SET.
 The menu screen appears on the monitor TV. (If the Hour Meter is appeared, advance to the next page by using the PLAY (-) or REC (+) button.)
- 3. Adjust C3111 so that the end of the cursor is located as shown in Figure E4.

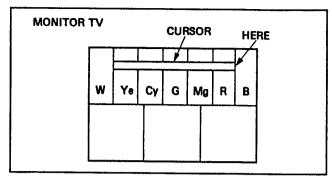


Figure E4

4-3-9. A/D INPUT LEVEL ADJ.

	•
BOARD	VIDEO 3
TP	TP8001(D-1)
ADJ	VR8001(D-1)
TAPE	
INPUT	COLOUR BAR SIGNAL
MODE	E-E
M.EQ	OSCILLOSCOPE
SPEC	2.4Vp-p ± 0.05Vp-p

[SET UP]

INPUT : LINE

- 1. Supply a colour bar signal to video input.
- 2. Connect the Oscilloscope to TP8001.
- 3. Adjust VR8001 so that video level is 2.4Vp-p ± 0.05Vp-p as shown in Figure E5.

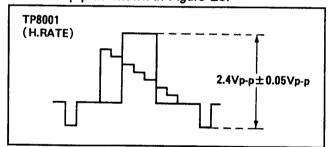


Figure E5

4-3-10. E-E OUTPUT LEVEL ADJ.

BOARD	VIDEO 2 C.B.A.
TP	VIDEO OUT
ADJ	VR3305
TAPE	
INPUT	COLOUR BAR SIGNAL
MODE	E-E
M.EQ	WAVE FORM MONITOR
SPEC	Y : LEVEL = 1.0 ± 0.02Vp-p C : LEVEL = 0.65 ± 0.15VP-P

[SET UP]

INPUT SW : LINE

- 1. Supply the colour bar signal to video input.
- 2. Connect the waveform monitor to video output with a 75Ω termination.
- 3. Adjust VR3305 so that the Y level becomes 1.0 ± 0.02Vp-p as shown in Figure E6.
- 4. Confirm the cyan level are 0.65 ± 0.15Vp-p.

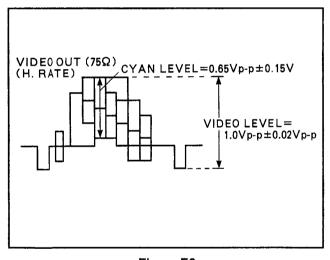


Figure E6

4-3-11. S-VHS RECORDING CURRENT ADJ.

BOARD	VIDEO 1 C.B.A. / HEAD AMP C.B.A.
TP	TP5003(H)(B-4), TP5002(L)(B-4)
ADJ	VR5001(REC-Y)(B-4), VR5002(REC-C)(B-4)
TAPE	S-VHS BLANK TAPE
INPUT	COLOUR BAR SIGNAL
MODE	REC
M.EQ	OSCILLOSCOPE
SPEC	35mVp-p±2mVp-p(C),150mVp-p±10mVp-p(Y)

[SET UP]

S-VHS SW : ON INPUT : LINE

- 1. Supply the colour bar signal to video input.
- 2. Connect the oscilloscope to TP5003 (HOT) and TP5002 (GND).
- 3. Place the unit in recording mode with colour bar signal.
- 4. Before chrominance recording current adjustment, luminance recording current (VR5001) should be closed to observe the chrominance signal.
- 5. Adjust VR5002 for 35mVp-p ± 2mVp-p as a cyan level of the chrominance signal as shown in Figure E7.
- 6. Next, adjust VR5001 for 150mVp-p ± 10mVp-p as luminance signal us shown in Figure E8.

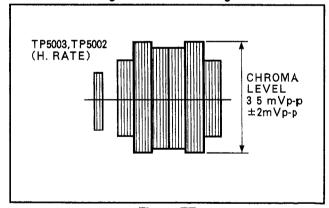


Figure E7

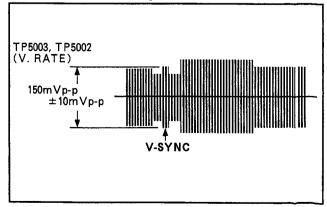


Figure E8

4-3-12. VHS RECORDING CURRENT ADJ.

BOARD	VIDEO 1 C.B.A. / HEAD AMP C.B.A.
TP	TP5003(H)(B-4), TP5002(L)(B-4)
ADJ	VR3008(C-1)
TAPE	BLANK TAPE
INPUT	COLOUR BAR SIGNAL
MODE	REC/PLAY
M.EQ	OSCILLOSCOPE
SPEC	150mVp-p ± 10mVp-p

Note: This adjustment should be always completed after S-VHS Recording Current Adjustment.

[SET UP]

S-VHS SW : OFF INPUT : LINE

- 1. Supply the colour bar signal to video input.
- 2. Connect the oscilloscope to TP5003 (HOT) and TP5002 (GND).
- 3. Place the unit in recording mode with colour bar signal.
- 4. Adjust VR3008 for 150mVp-p ± 10mVp-p as a luminance signal as shown in Figure E9.

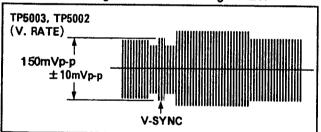


Figure E9

4-3-13. VHS PLAYBACK A/D LEVEL ADJ.

BOARD	VIDEO 1/VIDEO 3
TP	TP8001(D-1)
ADJ	VR3003(C-1)
TAPE	VHS SELF RECORDED TAPE
INPUT	COLOUR BAR SIGNAL
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	2.4Vp-p ± 0.1Vp-p

Note: This adjustment should be always completed after completion of all adjustments on the recording loop.

[SET UP]

S-VHS SW : OFF INPUT : LINE EDIT SW : OFF

- 1. Supply the colour bar signal to video input.
- 2. Record the colour bar signal.
- 3. Connect the oscilloscope to TP8001.
- 4. Playback the just recorded portion.
- 5. Adjust VR3003 so that the level is 2.4Vp-p \pm 0.1Vp-p as shown in Figure E10.

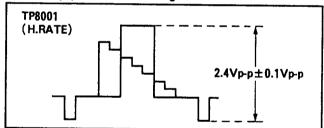


Figure E10

4-3-14. VHS Y PLAYBACK LEVEL ADJ.

BOARD	VIDEO 3 C.B.A.
TP	VIDEO OUT
ADJ	VR8002(D-1)
TAPE	VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	PLAY
M.EQ	WAVEFORM MONITOR
SPEC	1.0Vp-p ± 0.02Vp-p

Note:

This adjustment should be always completed after completion of all adjustments on the recording loop.

SET UP

S-VHS SW : OFF INPUT SW : LINE EDIT SW : OFF

- Supply the colour bar signal to video input and recording it for a few minute.
- 2. Connect the waveform monitor to the video out with a 75Ω termination.
- 3. Playback the just recorded portion.
- 4. Adjust VR8002 for 1.0Vp-p ± 0.02Vp-p as a luminance level as shown in Figure E11.

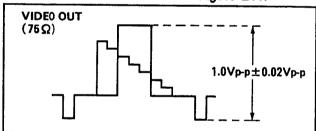


Figure E11

4-3-15. S-VHS SUB EMPHASIS LEVEL ADJ.

BOARD	VIDEO 1 C.B.A.
TP	TP3002(D-1)
ADJ	VR3004(C-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	400mVp-p ± 10mVp-p

Note:

This adjustment should be always completed after completion of all adjustments on the recording loop.

[SET UP]

S-VHS SW : ON EDIT SW : OFF

- 1. Supply the colour bar signal to video input and record it for a few minute.
- 2. Playback the just recorded portion.
- 3. Connect the oscilloscope to TP3002.
- 4. Adjust VR3004 for 400mVp-p ± 10mVp-p as shown in Figure E12.

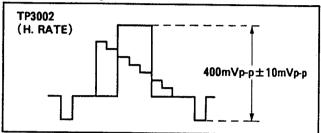


Figure E12

4-3-16. S-VHS PLAYBACK Y LEVEL ADJ.

BOARD	VIDEO 1
TP	VIDEO OUT
ADJ	VR3002(D-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOUR BAR SIGNAL
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	1.0Vp-p ± 0.02Vp-p

Note: This adjustment should be always completed after completion of all adjustments on the

recording loop and VHS playback adjustment.

ISET UP1

S-VHS SW : ON INPUT SW : LINE EDIT SW : OFF

- Supply the colour bar signal to video input and recording it for a few minutes.
- 2. Connect the oscilloscope to the video out with a 75Ω termination.
- 3. Playback the just recorded portion.
- 4. Adjust VR3002 for 1.0Vp-p ± 0.02Vp-p as shown in Figure E13.

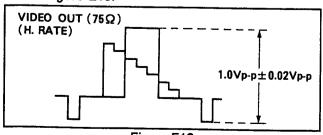


Figure E13

4-3-17. VHS PLAYBACK FREQUENCY RESPONSE ADJ.

BOARD	VIDEO 1 C.B.A.
TP	VIDEO OUT
ADJ	VR3009(C-1)
TAPE	SELF RECORDED TAPE
INPUT	SWEEP (WITH OUT BURST)
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	100KHz : 2MHz = 5 : 5.0 ± 1.0

- 1. Set the sweep generator output as shown in Figure E14.
- 2. Record the sweep signal.
- 3. Playback the just recorded portion.
- 4. Connect the oscilloscope to video out.
- 5. Adjust VR3009 so that the playback frequency response becomes 5 : 5.0 ± 1.0 at the marker points of 100KHz and 2MHz as shown in Figure E15.

(Vary the vertical scope setting until the 100KHz level reaches 5 division)

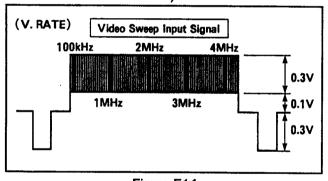


Figure E14

VIDEO OUT (V. RATE)

100kHz
2MHz
5 UNIT

Figure E15

4-3-18. S-VHS PLAYBACK FREQUENCY RESPONSE

BOARD	VIDEO 1
TP	VIDEO OUT
ADJ	VR3006(C-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	SWEEP (WITHOUT BURST)
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	100KHz : 4MHz = 5 : 4.0 ± 0.5

- 1. Set the sweep generator output as shown in Figure E16.
- 2. Record the sweep signal.
- 3. Playback the just recorded portion.
- 4. Connect the oscilloscope to video out.
- Adjust VR3006 so that the playback frequency response becomes 5: 4.0 ± 0.5 at the marker point of 100KHz and 4MHz as shown in Figure E17.

(Vary the vertical scope setting until the 100KHz level reaches division)

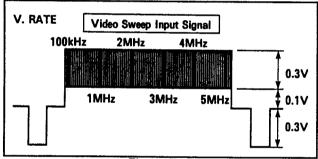
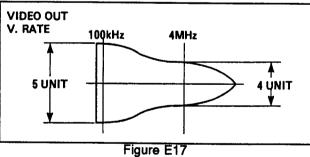


Figure E16



4-3-19. S-VHS SUPER LIMITER ADJ.

BOARD	VIDEO 1 C.B.A.
TP	TP3003(C-2)
ADJ	VR3007(C-2)
TAPE	
INPUT	SINEWAVE (7MHz 200mVp-p)
MODE	E-E
M.EQ	OSCILLOSCOPE
SPEC	400mVp-p ± 20mVp-p

Note: Prepare the oscilloscope which is type's more than 100MHz.

[SET UP] S-VHS ON

- Set the signal generator (sine-wave) to 7MHz, 200mVp-p and supply it to TP3004.
- 2. Connect the 100MHz type's oscilloscope to TP3003.
- 3. Adjust VR3007 so that the level becomes 400mVp-p ± 20mVp-p as show in Figure E18.

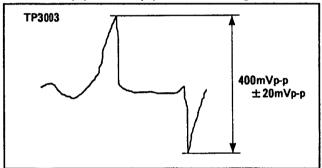


Figure E18

4-3-20. WHITE BALANCE ADJ.

BOARD	VIDEO 2 C.B.A.
TP	VIDEO OUT
ADJ	VR3302(D-1), VR3303(D-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOUR BAR SIGNAL
MODE	PLAY
M.EQ	VECTORSCOPE
SPEC	REFER TO FIG E19

[SET UP]

S-VHS SW : ON INPUT SW : LINE

- 1. Supply the colour bar signal to video input.
- 2. Record the colour bar signal by S-VHS mode for a few minutes.
- 3. Connect the vectorscope to video output.
- 4. Playback the just recorded portion.
- 5. Adjust VR3302 and VR3303 so that the point "C" becames center as shown in Figure E19.

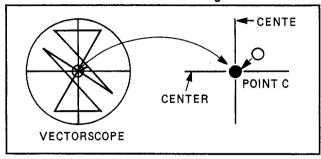


Figure E19

4-3-21. PLAYBACK CHROMA LEVEL ADJ.

BOARD	VIDEO 2 C.B.A.
TP	VIDEO OUT
ADJ	VR3304(D-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	PLAY
M.EQ	WAVE FORM MONITOR
SPEC	0.65Vp-p ± 0.03Vp-p

[SET UP] S-VHS SW : ON

- 1. Supply the colour bar signal to video input and record it for a few minute.
- 2. Connect the waveform monitor to video output with a 75Ω termination.
- 3. Playback the just recorded portion.
- 4. Adjust VR3304 so that the cyan level becomes 0.65Vp-p ± 0.03Vp-p as shown in Figure E20.

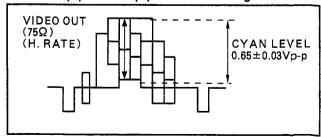


Figure E20

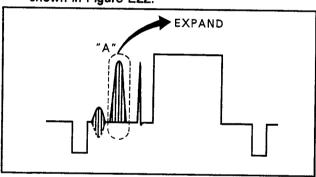
4-3-22. Y/C TIMING ADJ.

BOARD	VIDEO 2
TP	VIDEO OUT
ADJ	VR3301 (D-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	SIN₂ PULSE & BAR
MODE	PLAY
M.EQ	WAVE FORM MONITOR
SPEC	REFER TO E22

[SET UP]

S-VHS SW: ON INPUT SW: LINE EDIT SW: OFF

- 1. Supply the SIN2 Pulse for signal to video input.
- 2. Record the colour bar signal by S-VHS mode for a few minuter.
- 3. Connect the waveform monitor to video output and exrand the "A" portion as shown in Figure E21.
- 4. Adjust VR3301 so that the waveform becomes as shown in Figure E22.



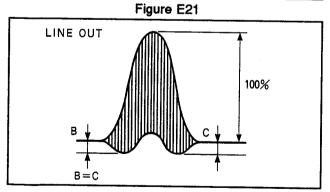


Figure E22

4-3-23. PRE-AMPLIFIER ADJ.

BOARD	AUDIO C.B.A.		
TP	AUDIO OUTPUT CH1, CH2		
ADJ	Hi-Fi CH1: VR4501(C-1), CH2: VR4502(C-1)		
TAPE			
INPUT	1KHz, -8dBv SINEWAVE SIGNAL		
MODE	STOP		
M.EQ	V.T.V.M.		
SPEC	Hi-Fi OUTPUT : -8dBv ± 0.2dBv NORM OUTPUT : -8dBv ± 1dBv		

- Set the Hi-Fi audio level control VR (CH1, CH2) on the Front Panel to the centre click position.
- 2. Set the audio output select switch to Hi-Fi mode.
- Supply 1KHz, -8dBv sinewave signal to audio input.
- 4. Connect the V.T.V.M. to audio output.
- 5. Adjust VR4501 (CH1), VR4502 (CH2) so that the levels become -8.0dBv \pm 0.2dBv.
- Set the audio output select switch to NORM mode.
- 7. Confirm the CH1 and CH2 levels are -8.0dBv \pm 1.0dBv.

4-3-24. AUDIO LEVEL METER ADJ.

BOARD	AUDIO C.B.A.
TP	AUDIO LEVEL METER
ADJ	CH1: VR4505(B-3), CH2: VR4506(B-3)
TAPE	
INPUT	1KHz,-8dBv SINEWAVE SIGNAL
MODE	STOP
M.EQ	
SPEC	Hi-Fi: 0dB, NORM: 0dB

Note: This adjustment should be performed only after completion of 4-3-23.PRE-AMPLIFIER ADJ.

- 1. Set the audio output select switch to Hi-Fi mode.
- Set the Hi-Fi audio level control VR (CH1, CH2) on the Front Panel to the centre click position.
- Supply 1KHz, -8dBv sinewave signal to audio inputs (CH1, CH2).
- Adjust VR4505 (CH1) and VR4506 (CH2) so that the Audio Level Meter shows 0dB as shown in Figure E23.

AUDIO LEVEL SE	3 🗀	LIGHT
--	-----	-------

Figure E23

4-3-25. NORMAL AUDIO FREQUENCY RESPONSE ADJ.

BOARD	AUDIO C.B.A.
TP	AUDIO OUTPUT (CH1,CH2)
ADJ	CH1: VR4001(B-1), CH2: VR4003(B-1)
TAPE	VFM8180HADH, PORTION: 3
INPUT	
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	400Hz = 5kHz (± 0.5dB)

- 1. Set the VR4002 and VR4004 to centre position.
- 2. Set thte Aduio output select switch to NORM.
- 3. Connect a scope to Audio Outputs (CH1, CH2).
- Adjust VR4001 (CH1) and VR4003 (CH2) so that the 400Hz and 5KHz levels becomes the same (0 ± 0.5dB) as shown in Figure E24.

Note: After this adjustment is finished, adjust 4-3-26. Normal Audio PB Gain Adj.

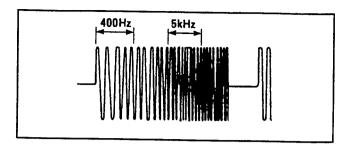


Figure E24

4-3-26. NORMAL AUDIO PLAYBACK GAIN ADJ.

BOARD	AUDIO P.C.B.
TP	CH1, CH2 AUDIO OUTPUT
ADJ	CH1: VR4002(B-1), CH2: VR4004(B-1)
TAPE	VFM8180HADH, PORTION: 3
INPUT	
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	300mVp-p ± 15mV

Note: This adjustment should be performed only after completion of 4-3-25. Normal Audio Frequency Response Adj.

- 1. Set the audio output select switch to NORM.
- 2. Connect the a scope to audio outputs (CH1,CH2).
- 3. Playback the alignment tape (Portion : 3).
- 4. Adjust VR4002 (CH1) and VR4004 (CH2) so that the levels become 300mVp-p ± 15mV as shown in Figure 25.

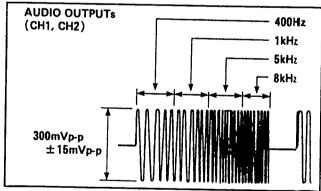


Figure E25

4-3-27. NORMAL AUDIO BIAS CURRENT ADJ.

BOARD	AUDIO C.B.A.		
TP	A/C HEAD		
ADJ	S-VHS:VR4007(CH1)(A-1),VR4008(CH2)(A-2)		
TAPE	S-VHS, VHS BLANK TAPE		
INPUT	COLOUR BAR SIGNAL (LINE)		
MODE	REC		
M.EQ	V.T.V.M.		
SPEC	S-VHS CH1: 5.0mVrms ± 0.1mVrms, CH2: 5.0mVrms ± 0.1mVrms VHS CH1: 4.0mVrms ± 0.3mVrms, CH2 4.0mVrms ± 0.3mVrms		

- 1. Supply the colour bar signal to video input.
- 2. Insert the S-VHS blank tape and place the deck in REC mode.
- 3. Connect the V.T.V.M. to the A/C head as shown in Figure E26.
- 4. Adjust VR4007 (CH1), VR4008 (CH2) so that the levels become 5.0mVrms ± 0.1mVrms.
- 5. Insert the VHS blank tape and place the deck in REC mode.
- 6. Confirm the CH1 and CH2 levels are 4.0mVrms \pm 0.3mVrms.

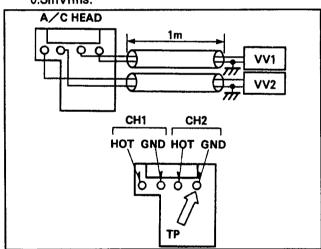


Figure E26

4-3-28. NORMAL AUDIO REC CURRENT ADJ.

BOARD	AUDIO C.B.A.
TP	AUDIO OUTPUT (CH1,CH2) TP4005(CH1)(C-1), TP4006(CH2)(B-1)
ADJ	VR4005(CH1)(C-1), VR4006(CH2)(D-1)
TAPE	S-VHS BLANK TAPE
INPUT	1KHz, -8dBv SINEWAVE
MODE	REC
M.EQ	V.T.V.M. (D.V.M.)
SPEC	S-VHS 0 ± 0.5dB, VHS 0 +1.0dB

[SET UP]

S-VHS SW : ON

- 1. Set the audio output select switch to NORM.
- 2. Connect the V.T.V.Ms to the deck as shown in Figure E27. Note that only one channel will be adjusted at a time.
- 3. Supply a 1KHz, -8dBv sine wave signal to the AUDIO INPUT (CH1).
- 4. Place the deck in the REC mode with S-VHS mode.
- 5. Adjust VR4005 (CH1) so that V.T.V.M. (2) reads approximetely 0.5Vrms (1.41Vp-p).
- 6. Playback the recorded portion, and note the amount of difference between V.T.V.M. (1) and (2).
- 7. Place the deck in the REC mode again, and readjust VR4005 (CH1) slightly, and repeat step 5, nothing the new dirfference.
- Repeat this "Record/Set/Note to Playback/Note" record and playback readings is minimized (0dBv ± 0.5dBv).
- 9. Repeat the above procedure again for channel 2, using the other set of test points and VRs.

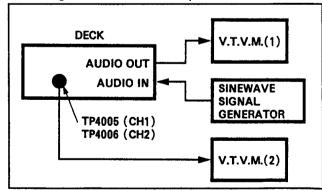


Figure E27

4-3-29. Hi-Fi AUDIO HEAD SWITCHING SHIFTER ADJ.

BOARD	AUDIO C.B.A.
TP	TP4501(C-1), TP4502(C-1)
ADJ	VR4507(D-1)
TAPE	VFM8180HADH PORTION : 2
INPUT	
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	SEE FIGURE E28

- 1. Connect the oscilloscope to TP4502 (FM H.SW) for CH1 and TP4501 (FM ENV) for CH2.
- Playback the alignment tape (VFM8180HADH) portion 1.
- 3. Adjust VR4507 so that there is no drop-out while push the Tracking buttons ("+" or "-") as shown in Figure E28.

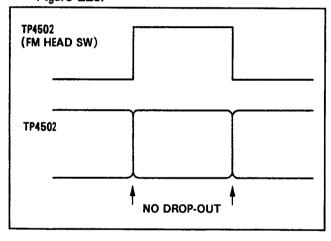


Figure E28

4-3-30. Hi-Fi AUDIO CARRIER FREQUENCY ADJ.

BOARD	FM AUDIO
TP	Pin25(CH1), Pin24(CH2) of FM AUDIO PACK
ADJ	VR4405 (CH1)(F-2), VR4402 (CH2)(E-4)
TAPE	
INPUT	NO SIGNAL
MODE	STOP
M.EQ	FREQUENCY COUNTER
SPEC	1.4MHz±10KHz(CH1), 1.8MHz±10KHz(CH2)

[SET UP]

HI-FI REC: ON (OSD)

- 1. Ground the Audio Inputs (CH1, CH2).
- 2. Counect a counter to pin25 of FM Audio Pack.
- 3. Adjust VR4405 (CH1) so that the frequency becomes 1.4MHz ± 10KHz.
- 4. Connect a counter to pin24 of FM Audio Pack.
- 5. Adjust VR4402 (CH2) so that the frequency becomes 1.8MHz ± 10KHz.

4-3-31. Hi-Fi AUDIO DEVIATION ADJ.

BOARD	FM AUDIO
TP	AUDIO OUTPUT (CH1, CH2)
ADJ	VR4407 (CH1)(E-1), VR4401 (CH2)(E-4)
TAPE	SELF RECORDED TAPE
INPUT	1KHz, -8dBv SINEWAVE
MODE	PLAY
M.EQ	V.T.V.M or OSCILLOSCOPE
SPEC	-8dBv ± 0.5dBv

ISET UP]

HI-FI REC : ON AUDIO OUT : HI-FI

- Set the Hi-Fi audio level control VR (CH1, CH2) on the Front Panel to the center click position.
- 2. Supply 1KHz, -8dBv sinewave signal to the audio inputs (CH1, CH2).
- 3. Record it for a few minutes.
- 4. Playback the recorded portion.
- 5. Connect a scope to the Audio outputs (CH1, CH2).
- 6. Adjust VR4407 (CH1) so that the level becomes -8dBv ± 0.5dBv.
- 7. Adjust VR4401 (CH2) so that the level becomes -8dBv ± 0.5dBv.

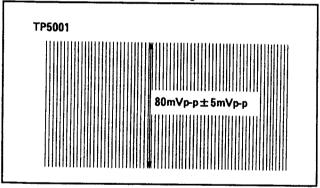
4-3-32. Hi-Fi AUDIO REC CURRENT ADJ.

BOARD	AUDIO
TP	TP5001(B-4)
ADJ	VR4503(C-1), VR4504(C-1)
TAPE	S-VHS SELF RECORD TAPE
INPUT	NO SIGNAL
MODE	
M.EQ	OSCILLOSCOPE
SPEC	CH1: 80mVp-p ± 5mVp-p, CH2: 350mVp-p ± 5mVp-p

[SET UP]

HI-FI REC : ON

- 1. Insert the S-VHS blank tape and place the deck in REC mode.
- 2. Connect the oscilloscope to TP5001.
- 3. Turn VR4504 fully counter-clockwise.
- 4. Adjust VR4503 so that the level becomes 80mVp-p ± 5mVp-p as shown in Figure E29.
- Adjust VR4504 so that the level become 350mVpp ± 5mVp-p as shown in Figure E30.





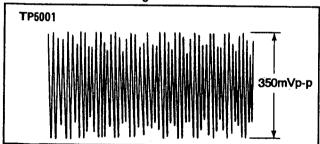


Figure E30

SECTION 5

BLOCK DIAGRAMS

CONTENTS

ABBREVIATION CHART	BLK-2, 3
OVERRALL BLOCK DIAGRAM	BLK-4
SYSTEM CONTROL BLOCK DIAGRAM	BLK-5
SERVO BLOCK DIAGRAM	BLK-6
REEL DRIVE BLOCK DIAGRAM	BLK-7
FRONT (1 ~ 4) BLOCK DIAGRAM	BLK-8
VIDEO (1) BLOCK DIAGRAM	BLK-9
VIDEO (2), (3) BLOCK DIAGRAM	BLK-10

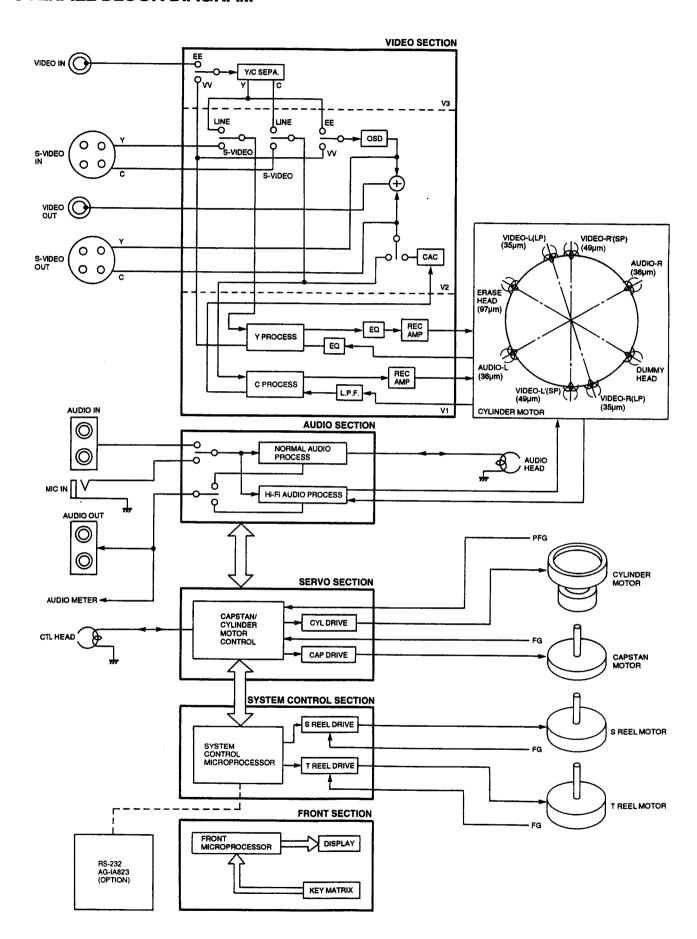
ABBREVIATION CHART

	NAME	SIGNAL		NAME	SIGNAL			
Α	A 12V	ANALOG 12V DC	†	CH2 DREC H	CH2 DELAYED RECORDING			
	A 5V	ANALOG 4V DC	1		(H)			
	A GND	ANALOG GROUND		CH1 AE HEAD	CH1 AUDIO ERASE HEAD			
	AHSW	ARTIFICAL VERTICAL SYNC		CH2 AE HEAD	CH2 AUDIO ERASE HEAD			
		SIGNAL		CH1 LINE OUT	CH1 LINE OUTPUT			
	ART V	ARTIFICAL VERTICAL SYNC		CH2 LINE OUT	CH2 LINE OUTPUT			
		SIGNAL		OFFIZ LINE OUT	Griz LINE OUTFOT			
	A. HEAD L	AUDIO HEAD (L)		D GND	DIGITAL GROUND			
	A. HEAD C	AUDIO HEAD (C)		D 5V	DIGITAL VOLTAGE 5V			
	A. HEAD R	AUDIO HEAD (R)		D REC L	DELATED RECORDING (L)			
		, , ,		DEW	DEW (E)			
С	CH2 PHONE	HEAD PHONES OUTPUT	1					
		(CH2)	E	ENV SEL	RF ENVELOPE SELECT			
	CH1 PHONE	HEAD PHONES OUTPUT		EDIT H	EDIT (H)			
		(CH1)	1	EP L	LP (H)			
	CAP VM	CAPSTAN MOTOR VOLTAGE	1	EXT SYNC	EXTERNAL SYNC SIGNAL			
	CUL	CAPSTAN SPEED CONTROL	1	EE H	RECORDING (H)			
		SIGNAL		EE 5V	RECORDING 5V			
	CAP RSF	CAPSTAN MOTOR REVERSE		EX REC 5V				
		/STOP/FORWARD]	ENVE OUT	EXTERNAL RECORDING 5V			
	CAP ET	CAPSTAN MOTOR ERROR	Ì	ENVE OUT	RF ENVELOPE SIGNAL OUT			
	·	TORQUE CONTROL	F	FOA				
ľ	CAP FG1	CAPSTAN FG1 PULSE	-	FG1	FG1 PULSE			
	CAP FG2	CAPSTAN FG1 PULSE		FG2	FG2 PULSE			
	CYL ET			FLYEH	FLYING ERASE (H)			
	CILEI	CYLINDER MOTOR ERROR	ł	FSC	FS CLOCK SIGNAL			
l	CVI DEO	TORQUE CONTROL		FLY E HEAD	FLYING ERASE HEAD			
	CYL PFG	CYLINDER PG/FG PULSE	1	FLY E GND	FLYING ERASE GND			
	CAP ON H	CAPSTAN MOTOR ON (H)	<u> </u>	<u></u>				
	CAP REV H	CAPSTAN REVERSE (H)	H	HSS	HORIZONTAL SYNC SIGNAL			
	CTL PULSE	CONTROL PULSE		HSW	HEAD SWITCHING PULSE			
İ	CAP FG	CAPSTAN FG PULSE		HIFI DREC H	DELATED FM RECORDING			
	CH2 AE L	CH2 AUDIO ERASE (L)			(H)			
	CH1 AE L	CH1 AUDIO ERASE (L)	l	HIFI MUTE H	FM AUDIO MUTE (H)			
	CH2 MUTE H	CH2 AUDIO MUTE (H)		HIFI H	FM AUDIO (H)			
	CH2 DREC L	CH2 DELATED FM		HIFI VR REF	FM AUDIO RECORDING			
İ		RECORDING (L)	ļ		LEVEL REFERENCE			
i	CH2 EE L	CH2 AUDIO-RECORDING (L)		HIFI CH2 VR	CH2 FM AUDIO RECORDING			
	CH1 MUTE H	CH1 AUDIO MUTE (H)			VOLUME			
	CH1 D REC L	CH1 DELATED FM		HIFI CH1 VR	CH1 FM AUDIO RECORDING			
		RECORDING (L)			VOLUME			
- 1	CH1 EE L	CH1 AUDIO RECORDING (L)		HIFI CH2 OUT	CH2 FM AUDIO OUTPUT			
	CAS SW	CASSETTE SWITCH		HIFI CH1 OUT	CH1 FM AUDIO OUTPUT			
	CH2 METER	CH2 METER SIGNAL	j	HIFI PB H	FM AUDIO PLAYBACK (H)			
	CH1 METER	CH1 METER SIGNAL	1	HIFI D REC (L)	FM DELAYED RECORDING			
1	CORR	CORREATION SIGNAL	ĺ	I THE TIES (L)	T .			
	COMB Y	COMBINATION LUMINANCE		HEAD SW	(L)			
1		SIGNAL		H.A. SW	HEAD SW PULSE			
	COMB C	COMBINATION		п.н. эм	HEAD AMP SWITCHING			
		CHROMINANCE SIGNAL			PULSE			
1	CH2 EE H	CH2 AUDIO RECORDING H	L	LINE OUT	AUDIO LINE CUE GIOVA			
[CH1 LINE IN	CH1 AUDIO LINE IN SIGNAL	_	LINE OUT	AUDIO LINE OUT SIGNAL			
	CH2 LINE IN	CH2 AUDIO LINE IN SIGNAL	14	MICHAEL				
	CH1 PHONE		М	MIC IN H	MICROPHONE SIGNAL			
1	—	CH1 PHONE SIGNAL		MIC IN	MICROPHONE SIGNAL			
	CH2 PHONE	CH2 PHONE SIGNAL			INPUT			
	CH1 MUT H	CH1 AUDIO MUTE (H)		M GND	MOTOR GROUND			
- 1	CH2 MUT H	CH2 AUDIO MUTE (H)						

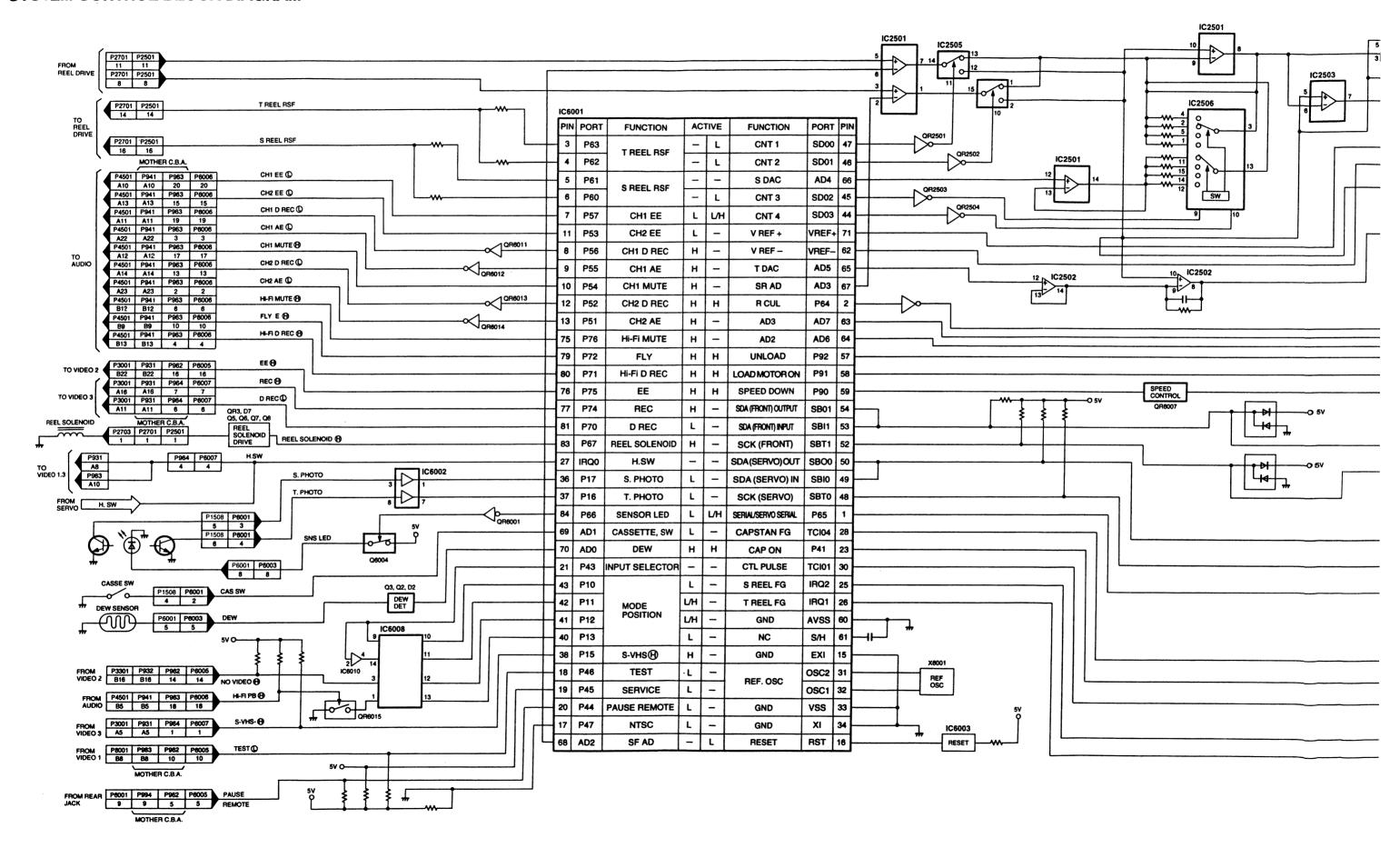
ABBREVIATION CHART

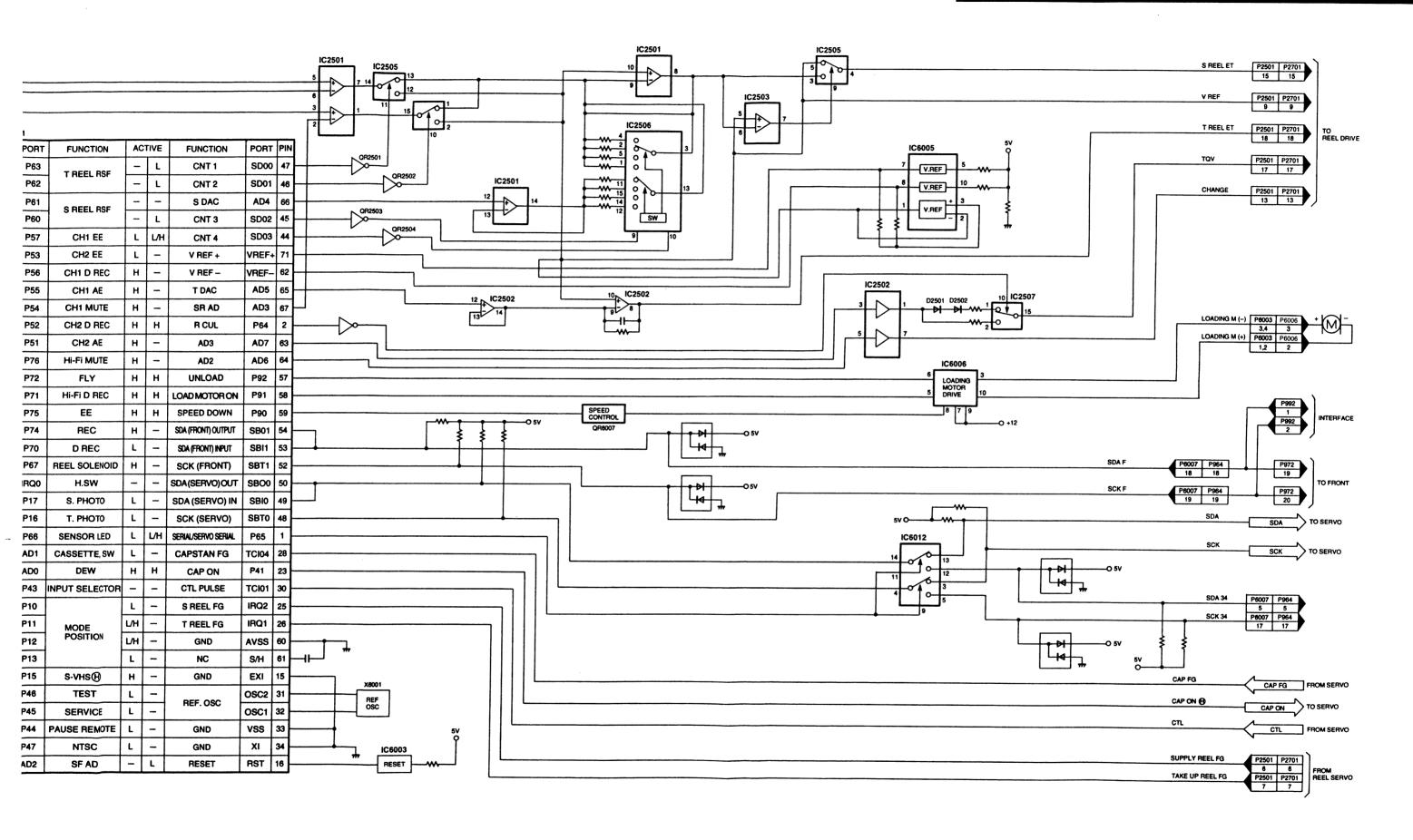
	NAME	SIGNAL		NAME	SIGNAL
М	MONITOR CH1 H	FM AUDIO MONITER CH1 (H)	s	S REEL VM	SYPPLY REEL DRIVE
	MONITOR CH2 H	FM AUDIO MONITER CH2 (H)	1		VOLTAGE
	M 14V	MOTOR VOLTAGE 14V		S REEL FG	SYPPLY REEL FG PULSE
	M 18V	MOTOR VOLTAGE 18V		SR PHOTO	SYPPLY REEL PHOTO
	MON OUT	NORMAL AUDIO SIGNAL		ŀ	TRANSISTOR
		OUTPUT		S REEL ET	SYPPLY REEL ERROR
	MON NOR L	LCH NORMAL AUDIO SIGNAL		}	TORQUE CONTROL
				S REEL RSF	SYPPLY REEL REVERSE
N	NO VIDEO H	NON VIDEO SIGNAL DETECT	1		/STOP/FORWARD
		(H)	}	ss	SYNC SIGNAL
	NOR CH1 OUT	CH1 NORMAL AUDIO SIGNAL		SDA S	SERIAL DATA FOR SERVO
	NOR CH2 OUT	CH2 NORMAL AUDIO SIGNAL	1	SCK S	SERIAL CLOCK FOR SERVO
	NOR R HEAD	NORMAL R-CH HEAD	1	S CASS L	VHS CASSETTE DETECT (L)
	NOR L HEAD	NORMAL L-CH HEAD	1	S-VHS H	SVHS CASSETTE DETECT (H)
		· · · · - ·		SDA F	SERIAL DATA FOR FRONT
Р	PB CTL	PLAYBACK CONTROL	┨	SCK F	
-		SIGNAL		SES LED	SERIAL CLOCK FOR FRONT
	PAUSE REMOTE	PAUSE REMOTE CONTROL			SENSOR LED
		SIGNAL		SAFETY TAB (L) SES GND	SAFETY TAB SW ON (L)
	POS PLAY	MECHANISUM POSITION	1	SES GIVD	SENSOR GROUND
		SWITCH PLAY		TREELVA	TAVE UD DEEL SECTION
	POS EJECT	MECHANISUM POSITION	'	T REEL VM	TAKE UP REEL DRIVE
	1 00 20201	SWITCH EJECT		T DEEL EO	VOLTAGE
}	POS STOP	MECHANISUM POSITION		T REEL FG	TAKE UP REEL FG PULSE
ı	1000101	SWITCH STOP		T REEL RSF	TAKE UP REEL REVERSE
	POS LOAD	MECHANISUM POSITION		TOU	/STOP/FORWARD
	FO3 LOAD	SWITCH LOAD		TQU	TORQUE CONTROL
	PICT CTL			T REEL ET	TAKE UP REEL ERROR
	PB RF C	PICTURE CONTROL PLAYBACK RF		TD AOM END	TORQUE CONTROL
	וווטוו	CHROMINANCE SIGNAL		TRACK ENV	TRACKING ENVELOPE
	PB EEY	PLAYBACK/RECORDING		TEST L	TEST (L)
		LUMINANCE SIGNAL		TRICK L	STILL, SEARCH MODE (L)
ļ	РВ С	PLAYBACK CHROMINANCE		TRICK (H)	STILL, SEARCH MODE (H)
		SIGNAL		W Defi	
	PLAY 5V	PLAY 5V	V	V REF	REFERECE VOLTAGE
	PLAT 5V	PLAT 5V		VR GND	AUDIO VOLUME GROUND
R	REEL SOL (H)	REEL SOLENOID ON (H)		2.5V REF	0.5/ 0555555
-	REG +12V	REGULATOR +12V		4P C IN	2.5V REFERECE VOLTAGE
	ROTARY SW	ROTARY SWITCH		TI O IN	4P CHROMINANCE SIGNAL
	REC H	RECORDING (H)		4P Y IN	INPUT
	REC C	RECORDING CHROMINANCE		-TE 1 1114	4P LUMINANCE SIGNAL
		SIGNAL		4P C OUT	INPUT
	REC Y	RECORDING LUMINANCE		4P C 001	4P CHROMINANCE SIGNAL
		SIGNAI		AD V OUT	OUTPUT
	REC RFC	RECORDING RF	ŀ	4P Y OUT	4P LUMINANCE SIGNAL
	11	CHROMINANCE SIGNAL		5	OUTPUT
	RE C	RF CHROMINANCE SIGNAL		5V	5V
	RF Y	RF LUMINANCE SIGNAL	•		1
	RF OUT	RF SIGNAL OUTPUT	ļ		
	REC 12V	REC 12V			1
	REC IN	REC INPUT		l	
	REC OUT		1		
	RF IN	RECORDING OUTPUT	ſ		Í
	REG 5V	RF SIGNAL INPUT			
I	TIEG OV	REG 5V	l		
- 1	1	l l		1	1

OVERALL BLOCK DIAGRAM

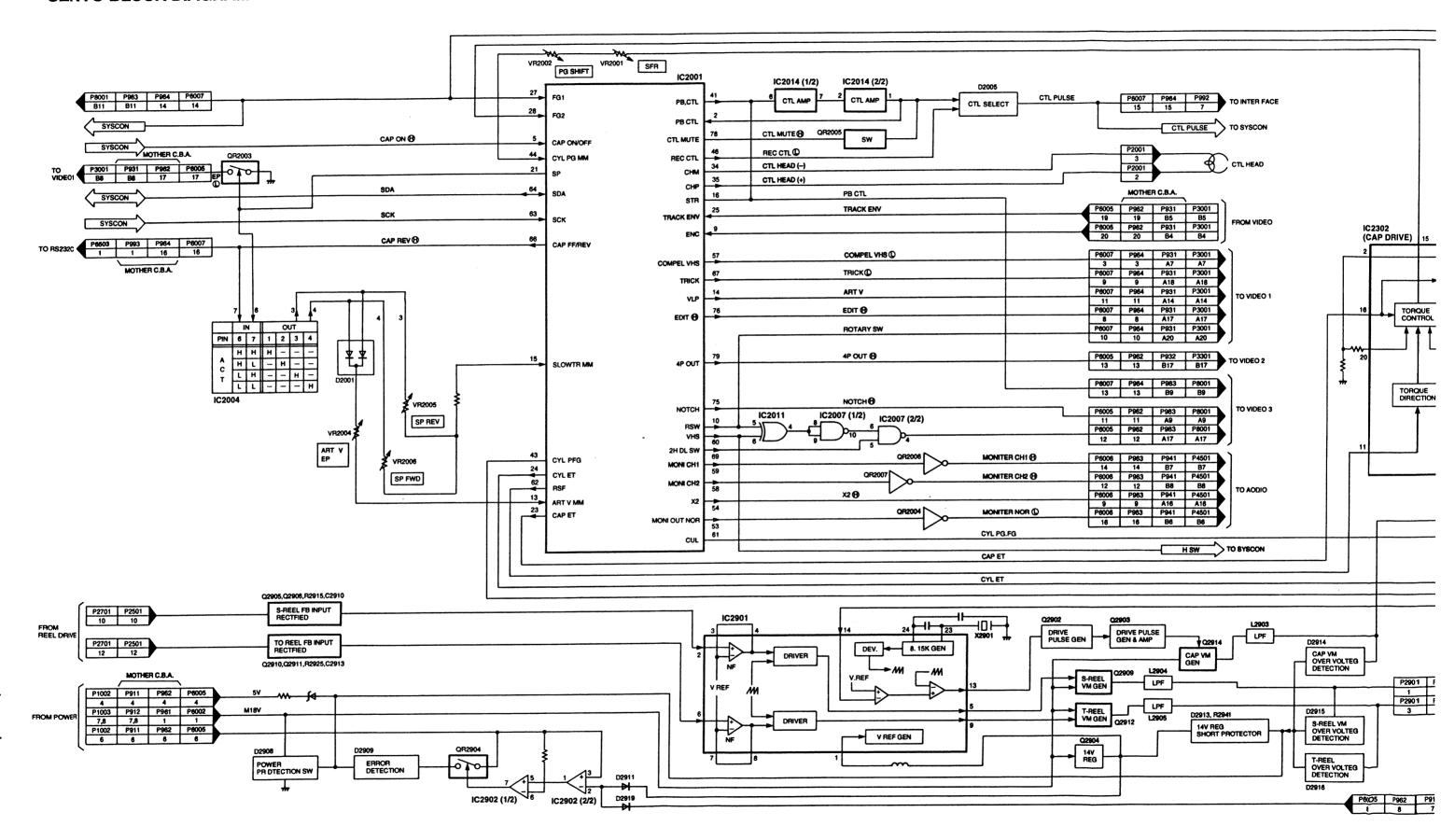


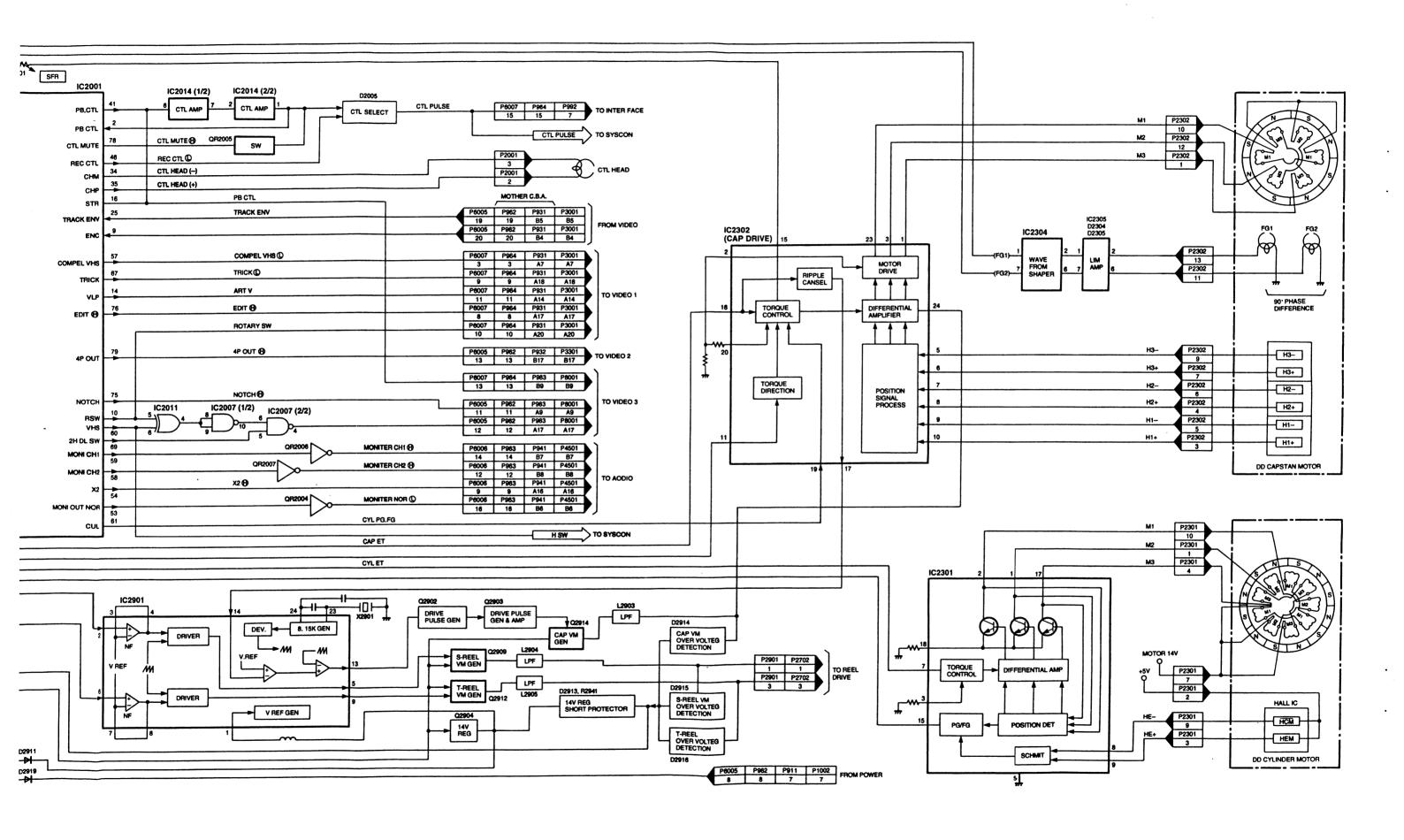
SYSTEM CONTROL BLOCK DIAGRAM



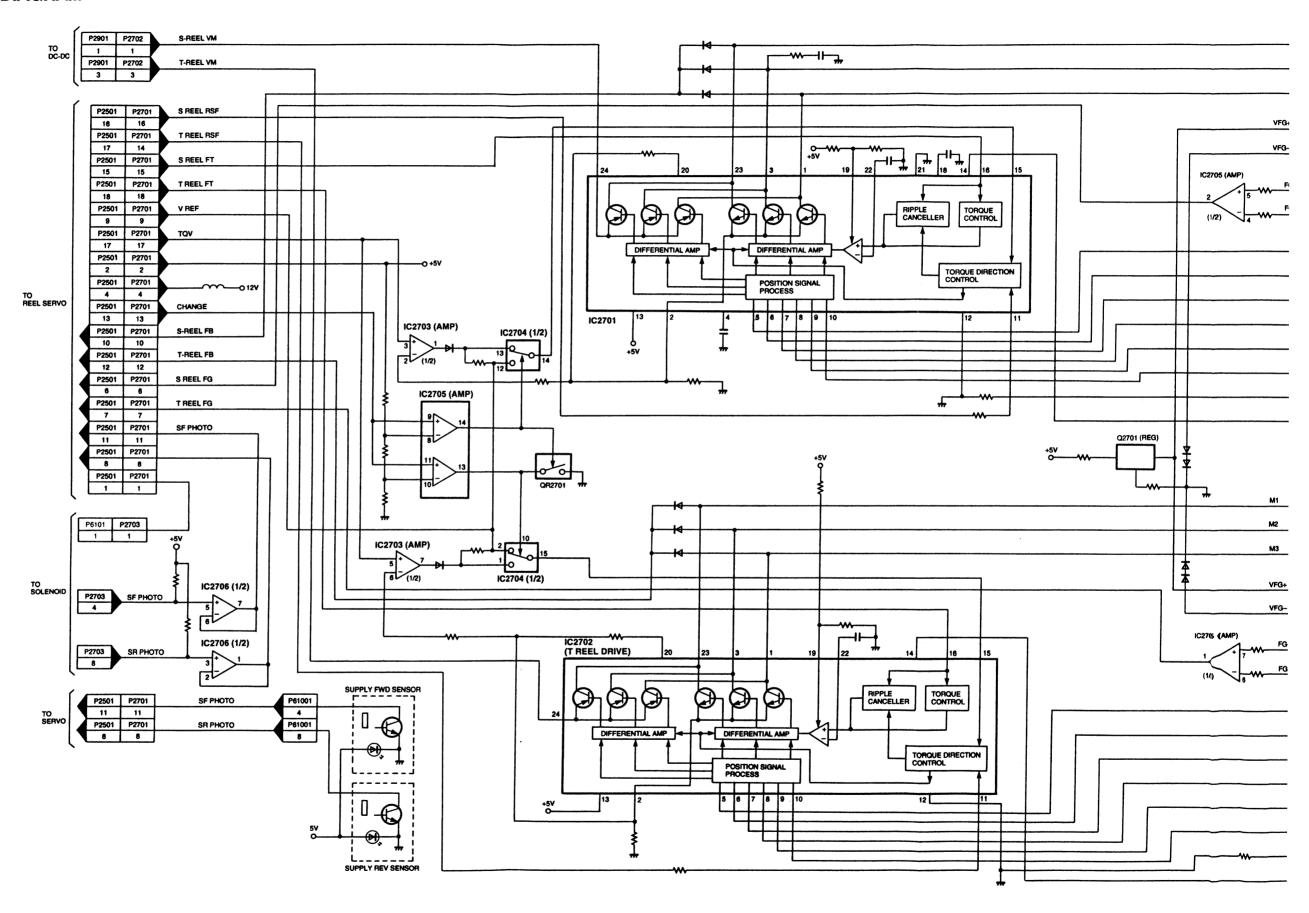


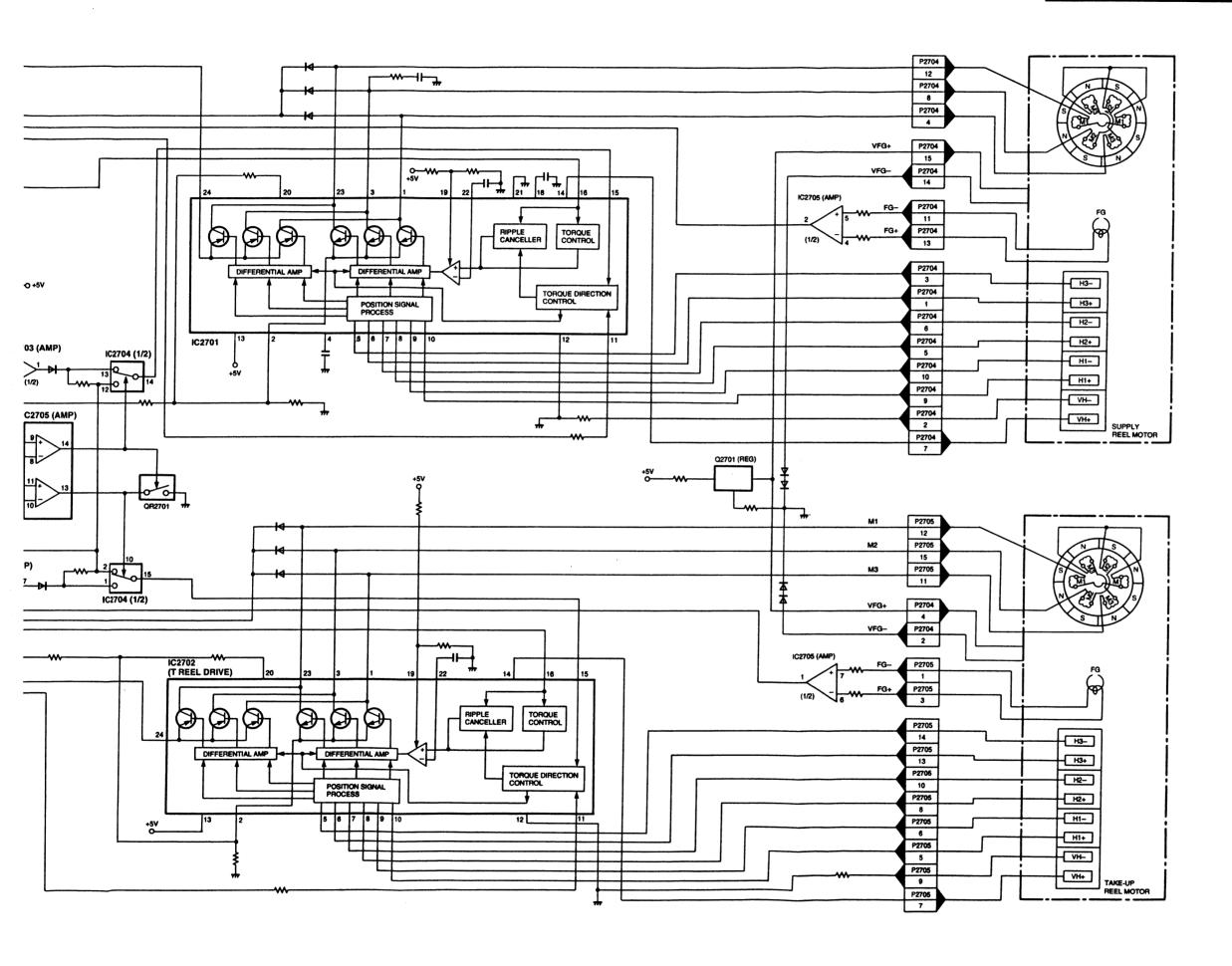
SERVO BLOCK DIAGRAM



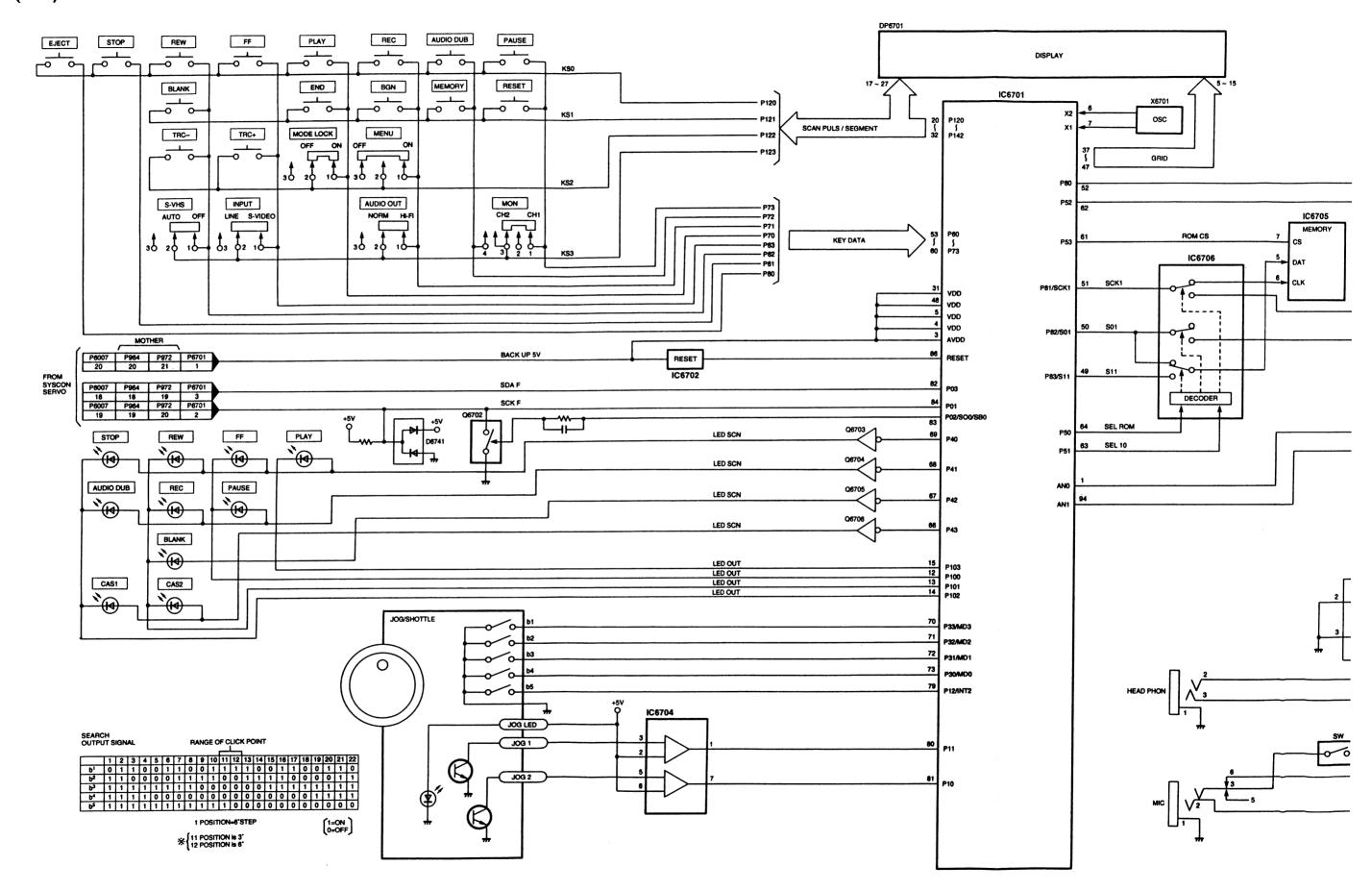


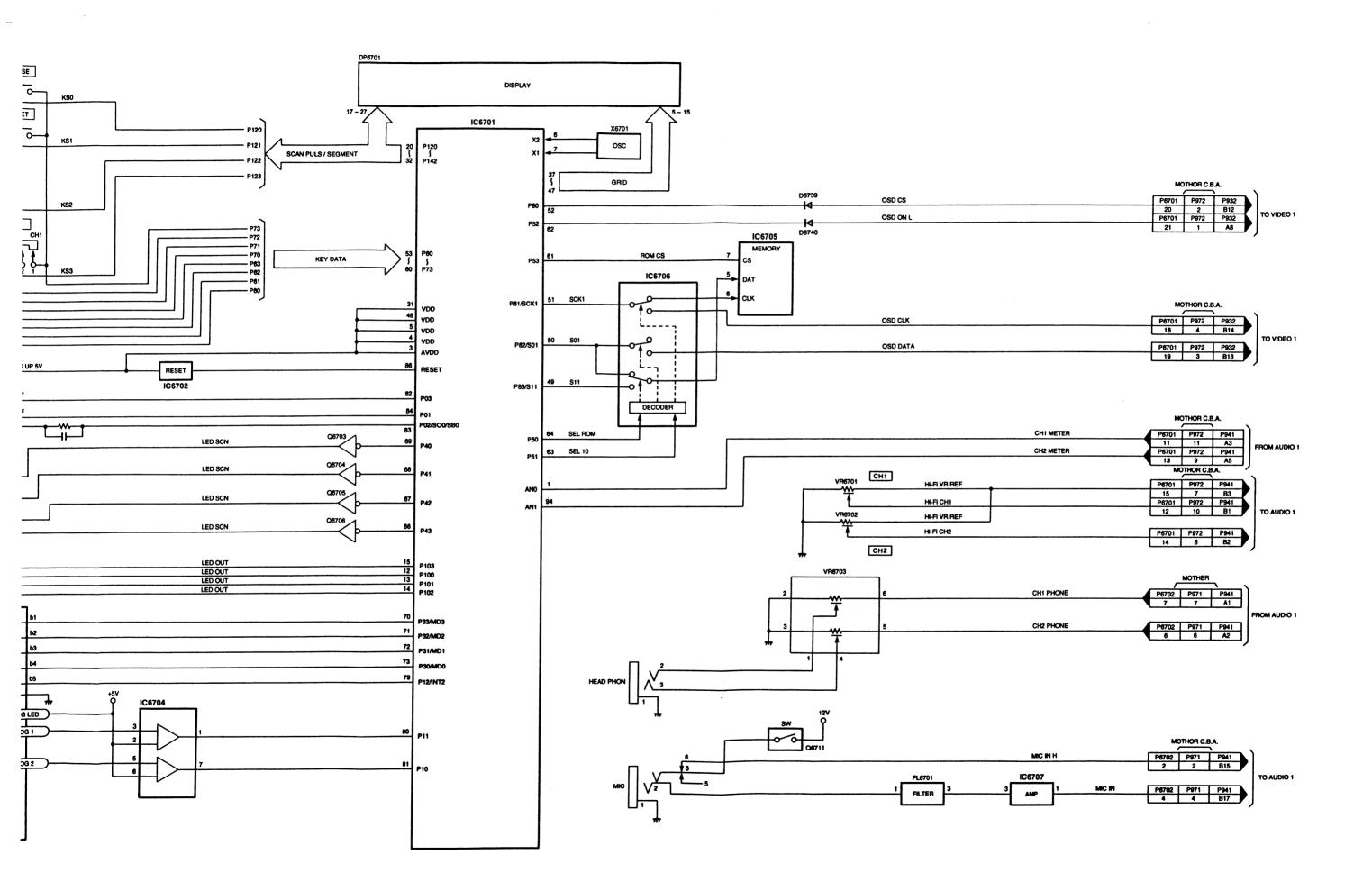
REEL DRIVE BLOCK DIAGRAM



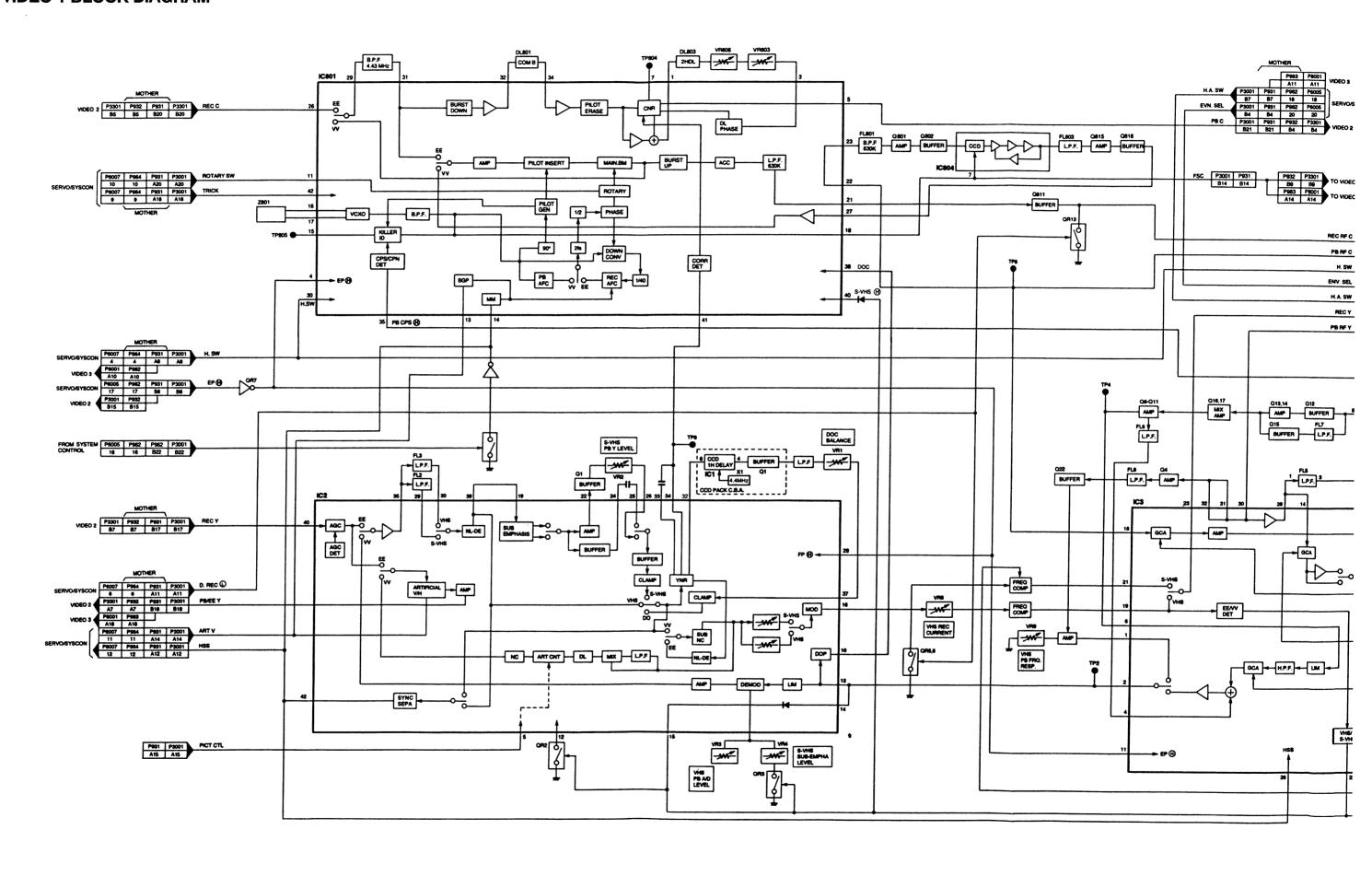


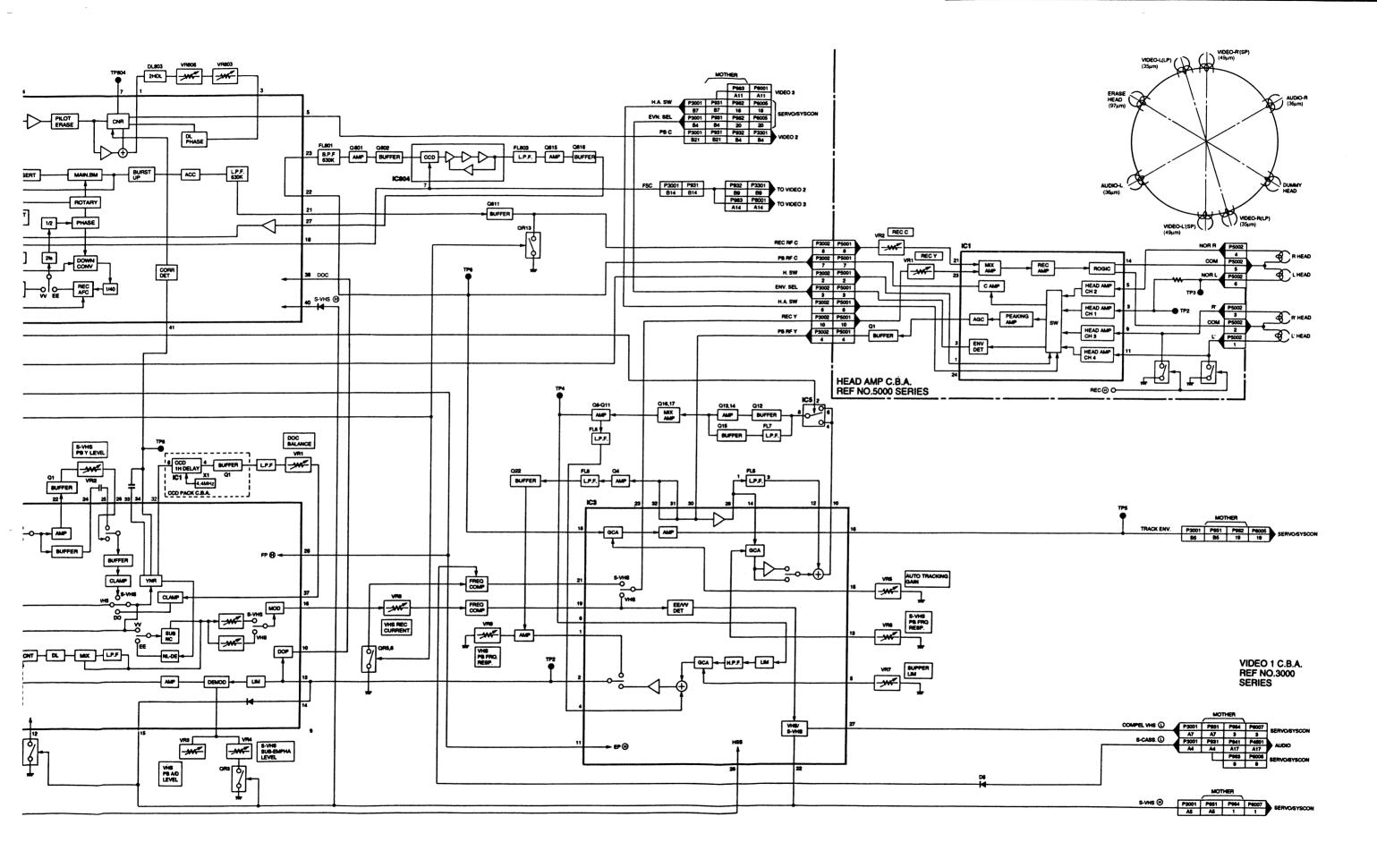
FRONT (1-4) BLOCK DIAGRAM



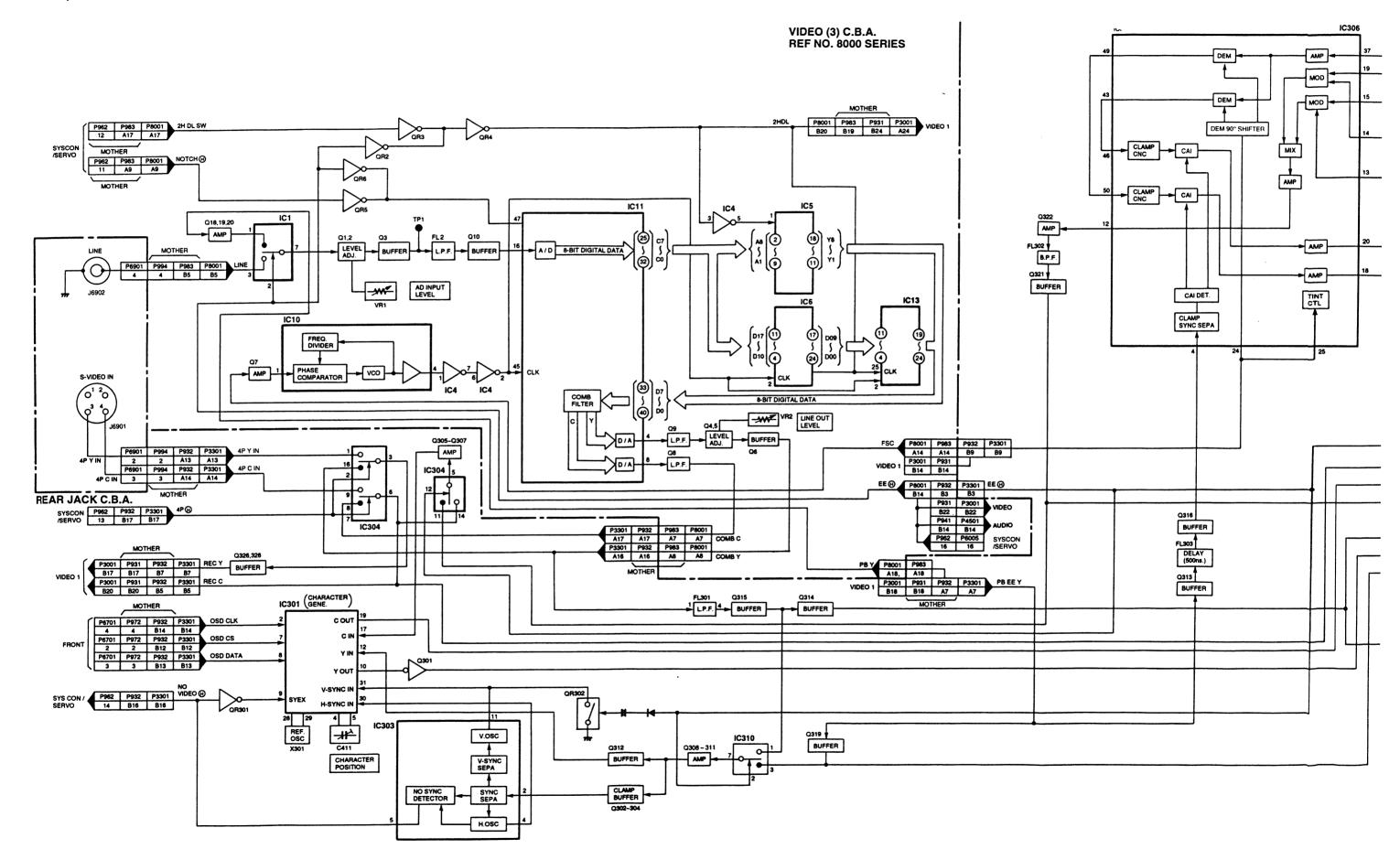


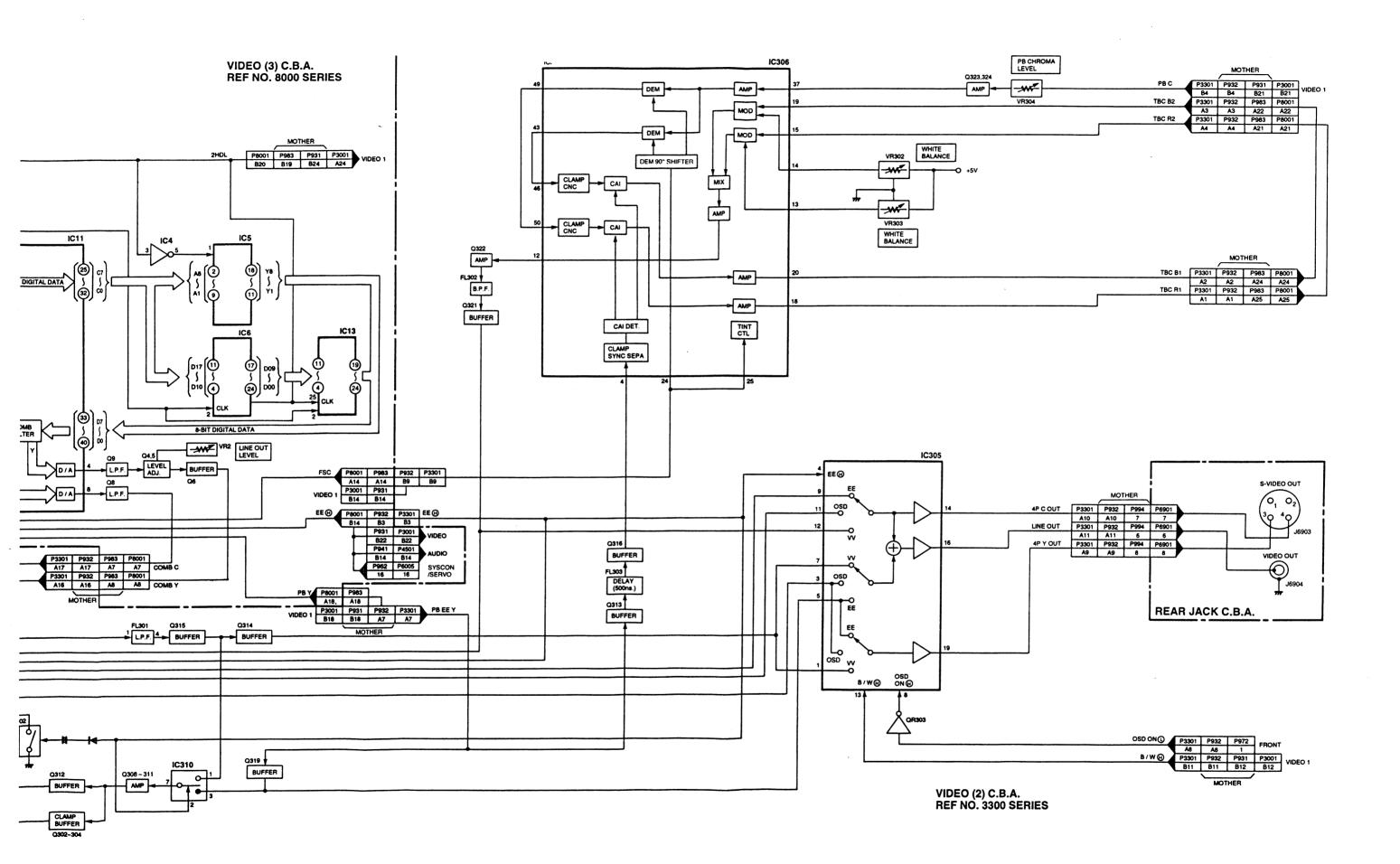
VIDEO 1 BLOCK DIAGRAM





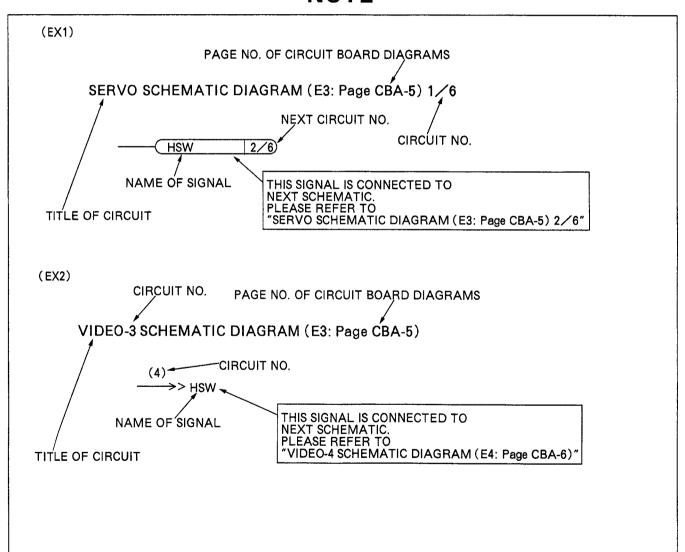
VIDEO 2, 3 BLOCK DIAGRAM





SCHEMATIC DIAGRAMS

NOTE



CONTENTS

POWER SUPPLY (1~3) SCHEMATIC DIAGRAM	SCM-3
SYSTEM CONTROL SCHEMATIC DIAGRAM (1/6)	
SERVO SCHEMATIC DIAGRAM (3/0) ····································	CM E
MOTOR DRIVE SCHEMATIC DIAGRAM (4/6)	ССМ 6
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DC-DC CONVERTOR SCHEMATIC DIAGRAM (5/6)	
CONNECTION SCHEMATIC DIAGRAM (6/6)	8-141-9
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FRONT (4) SCHEMATIC DIAGRAM (4/4)	OOM 40
VIDEO (1) SCHEMATIC DIAGRAM (1/2)	SCW-13
VIDEO (1) SCHEMATIC DIAGRAM (2/2)	SCIVI-14
VIDEO (2) SCHEMATIC DIAGRAM	SCM-16
VIDEO (3) SCHEMATIC DIAGRAM (1/2)	SCM-19
VIDEO (3) SCHEMATIC DIAGRAM (2/2)	SCM-20
AUDIO 1 SCHEMATIC DIAGRAM	SCM-21
FM AUDIO PACK SCHEMATIC DIAGRAM (IC4505)	·····SCM-22
AUDIO 2 SCHEMATIC DIAGRAM (104909)	SCM-23
HEAD AMP SCHEMATIC DIAGRAM	SCM-24
REAR JACK SCHEMATIC DIAGRAM	SCM-25
MOTHER SCHEMATIC DIACRAM	·····SCM-26
MOTHER SCHEMATIC DIAGRAM	·····SCM-27
INTERCONNECTION SCHEMATIC DIAGRAM ······	SCM-28

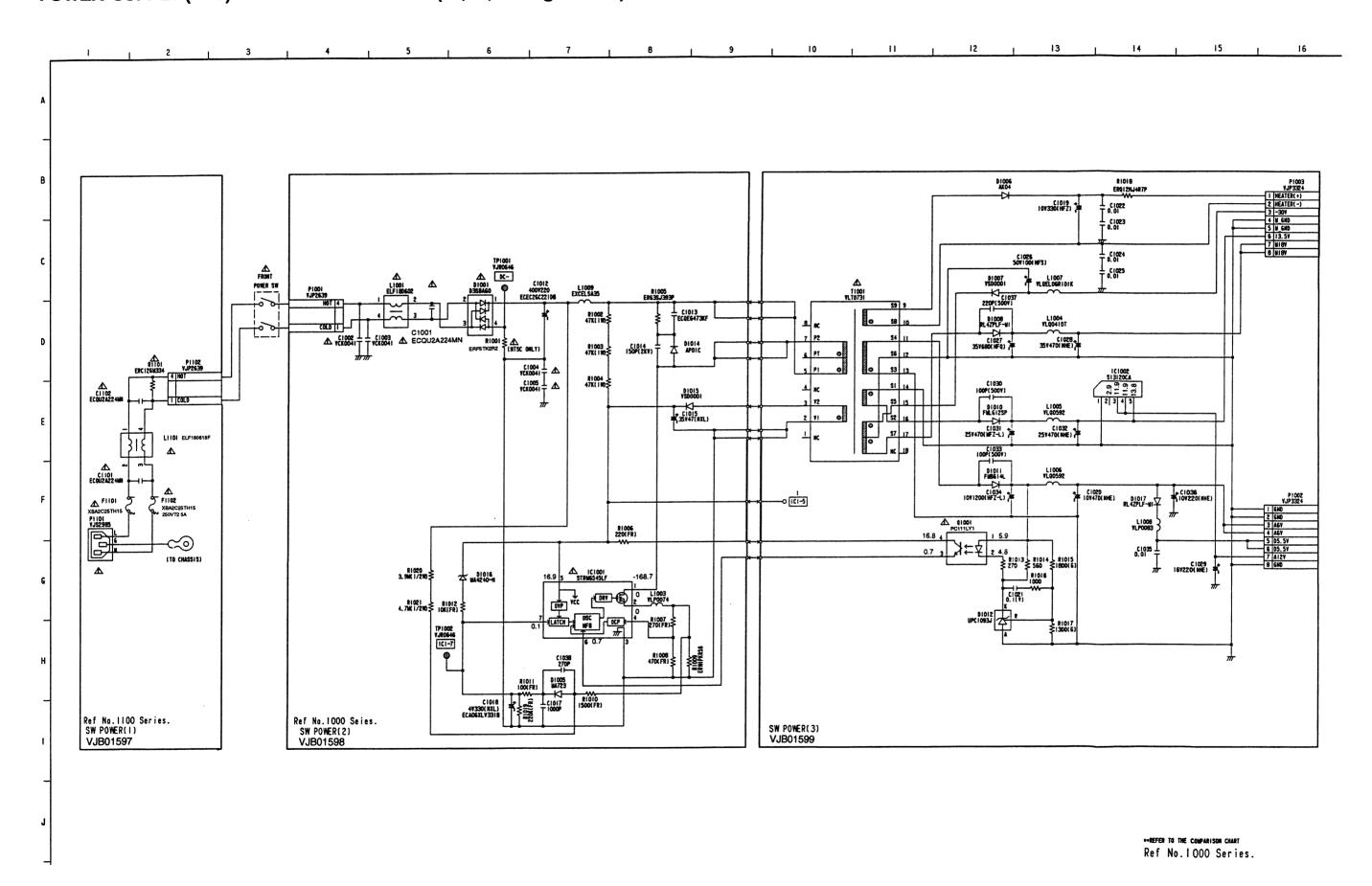
IMPORTANT SAFETY NOTICE

COMPONENTS IDENTIFIED WITH THE MARK A HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

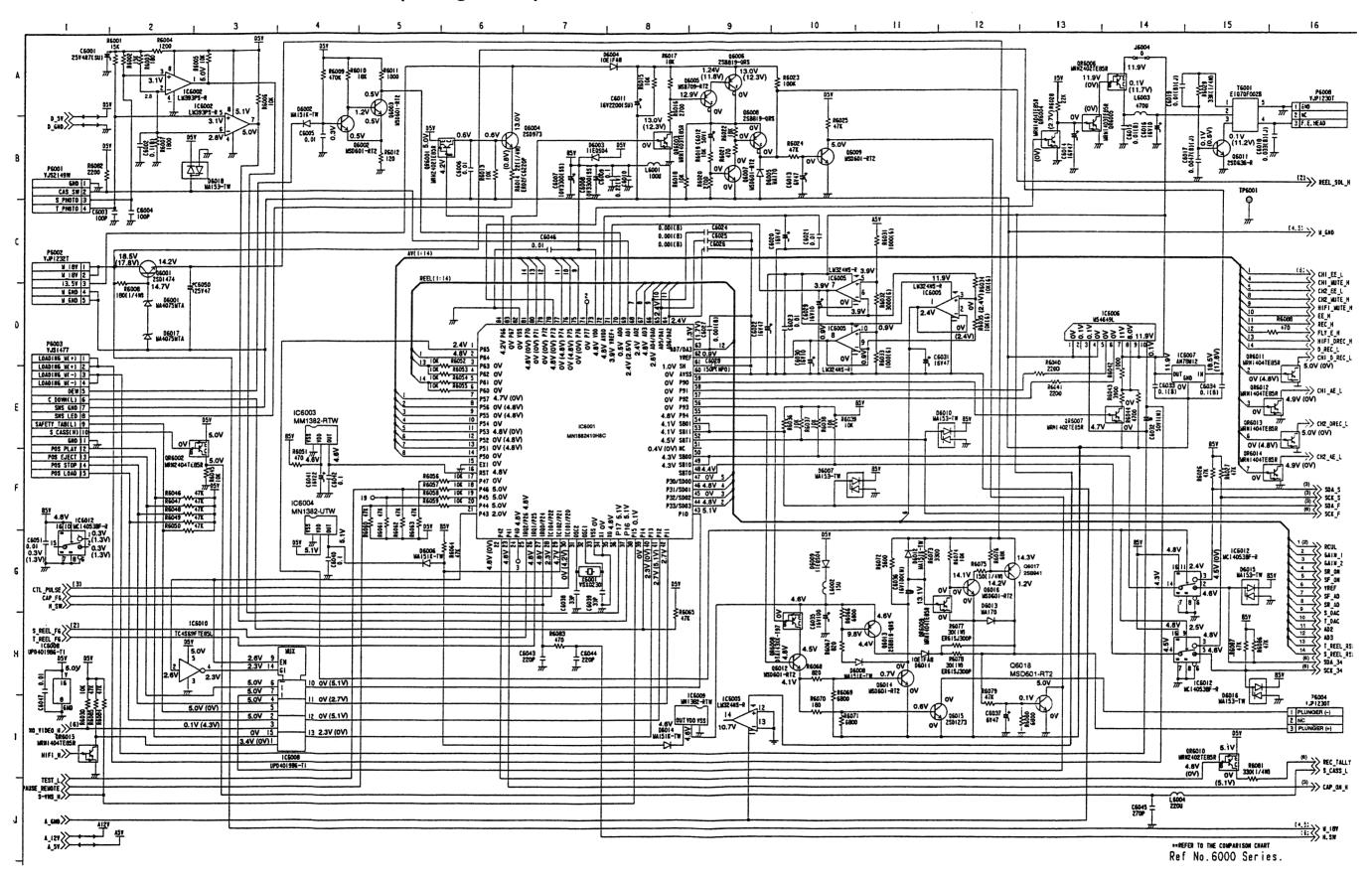
NOTE

DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

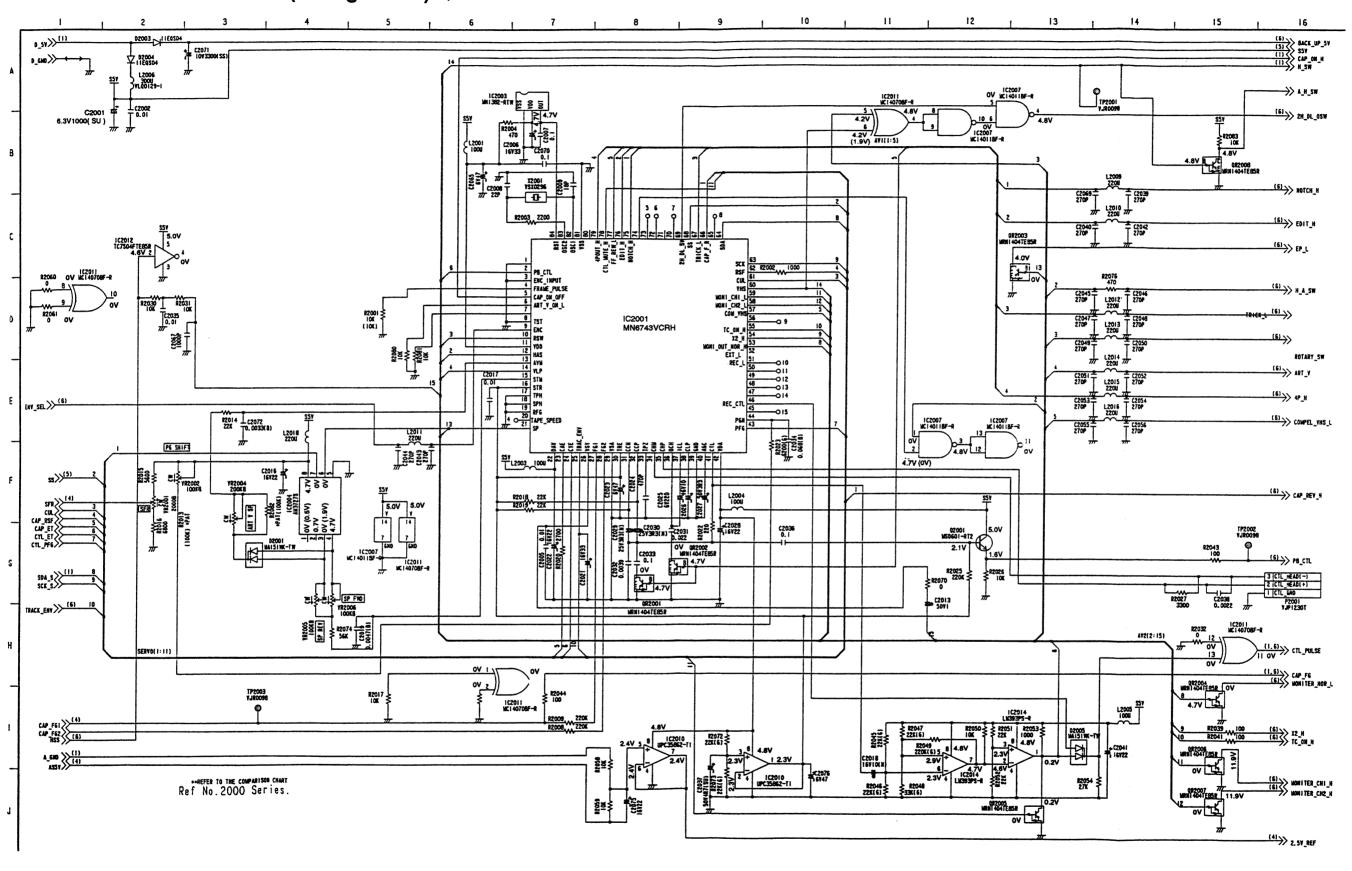
POWER SUPPLY (1~3) SCHEMATIC DIAGRAM (E1,E2,E3: Page CBA-3)

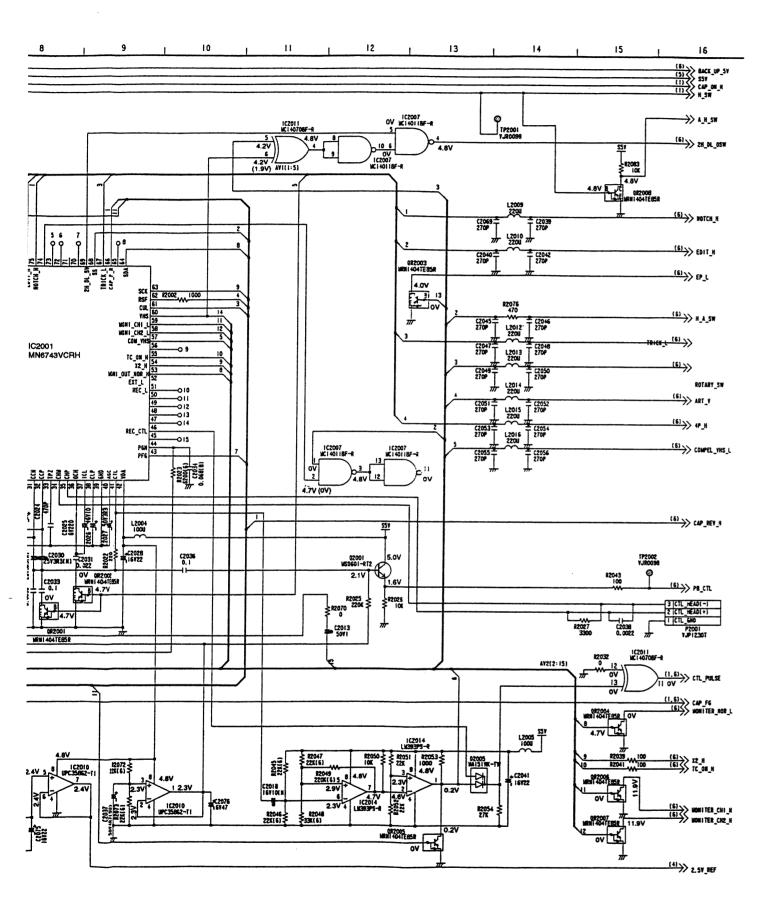


SYSTEM CONTROL SCHEMATIC DIAGRAM (E4: Page CBA-5) 1/6



SERVO SCHEMATIC DIAGRAM (E4: Page CBA-5) 3/6





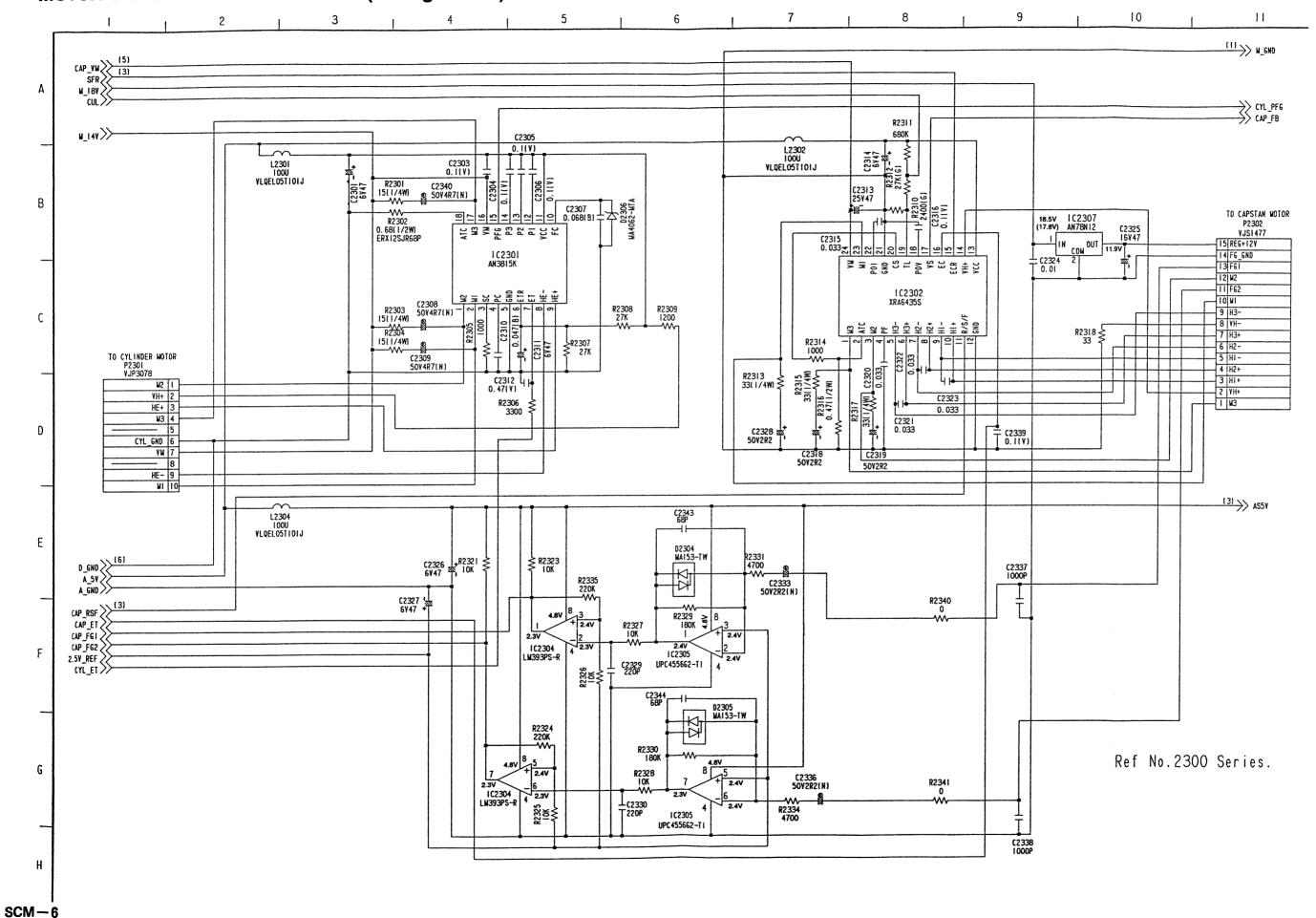
MOTOR DRIVE SERVO

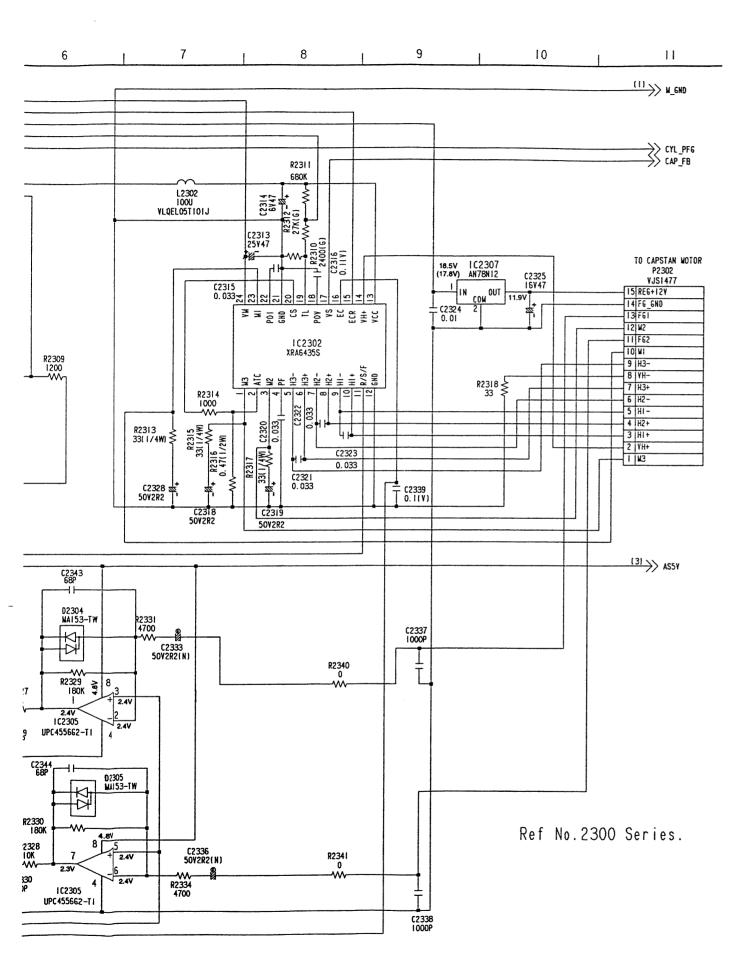
IC2001

PIN NO.	PLAY	REC	PIN NO.	PLAY	REC	PIN NO.	PLAY	REC	PIN NO.	PLAY	REC	PIN NO.	PLAY	REC	PIN NO.	PLAY	REC	PIN NO.	PLAY	REC
1	0V	0V	13	0V	0V	25	2.0V	0V	37	2.3V	2.3V	49	OV	0V	61	4.7V	4.7V	73	0V	0V
2	0.2V	0.2V	14	0V	0V	26	2.3V	2.3V	38	2.3V	2.3V	50	0V	0V	62	0V	0V	74	4.7V	0V
3	0V	0V	15	0V	0V	27	2.2V	2.2V	39	0V	0V	51	0V	0V	63	4.7V	4.7V	75	0V	0V
4	0V	0V	16	2.3V	2.3V	28	2.3V	2.3V	40	2.8V	2.3V	52	0V	0V	64	4.5V	4.5V	76	0V	0V
5	4.8V	4.8V	17	0V	0V	29	0V	۷0	41	2.3V	2.3V	53	0V	4.7V	65	4.7V	4.7V	77	4.7V	4.7V
6	0V	0V	18	0V	0V	30	2.3V	2.3V	42	4.8V	4.8V	54	0V	0V	66	0V	0V	78	0V	0V
7	0V	0V	19	0V	0V	31	2.5V	2.5V	43	V8.0	0.8V	55	0V	0V	67	4.7V	4.7V	79	0V	0V
8	0V	0V	20	0V	0V	32	2.4V	2.4V	44	2.8V	2.8V	56	0V	0V	68	0V	0V	80	0V	0V
9	4.4V	0V	21	0V	0V	33	4.7V	4.7V	45	0V	0V	57	0V	0V	69	0V	0V	81	0V	0V
10	4.1V	4.8V	22	4.8V	4.8V	34	0V	2.8V	46	0V	4.7V	58	0V	0V	70	0V	0V	82	2.1V	2.1V
11	4.7V	4.7V	23	2.4V	2.4V	35	0V	3.3V	47	0V	0V	59	0V	0V	71	4.7V	4.7V	83	2.1V	2.1V
12	0V	0V	24	2.3V	2.3V	36	0V	0V	48	οV	OV	60	4.7V	4.7V	72	ΟV	οv	84	4.7V	4.7V

MOTOR DRIVE SERVO

MOTOR DRIVE SCHEMATIC DIAGRAM (E4: Page CBA-5) 4/6





VIDE-V01109 / DRUCK 18

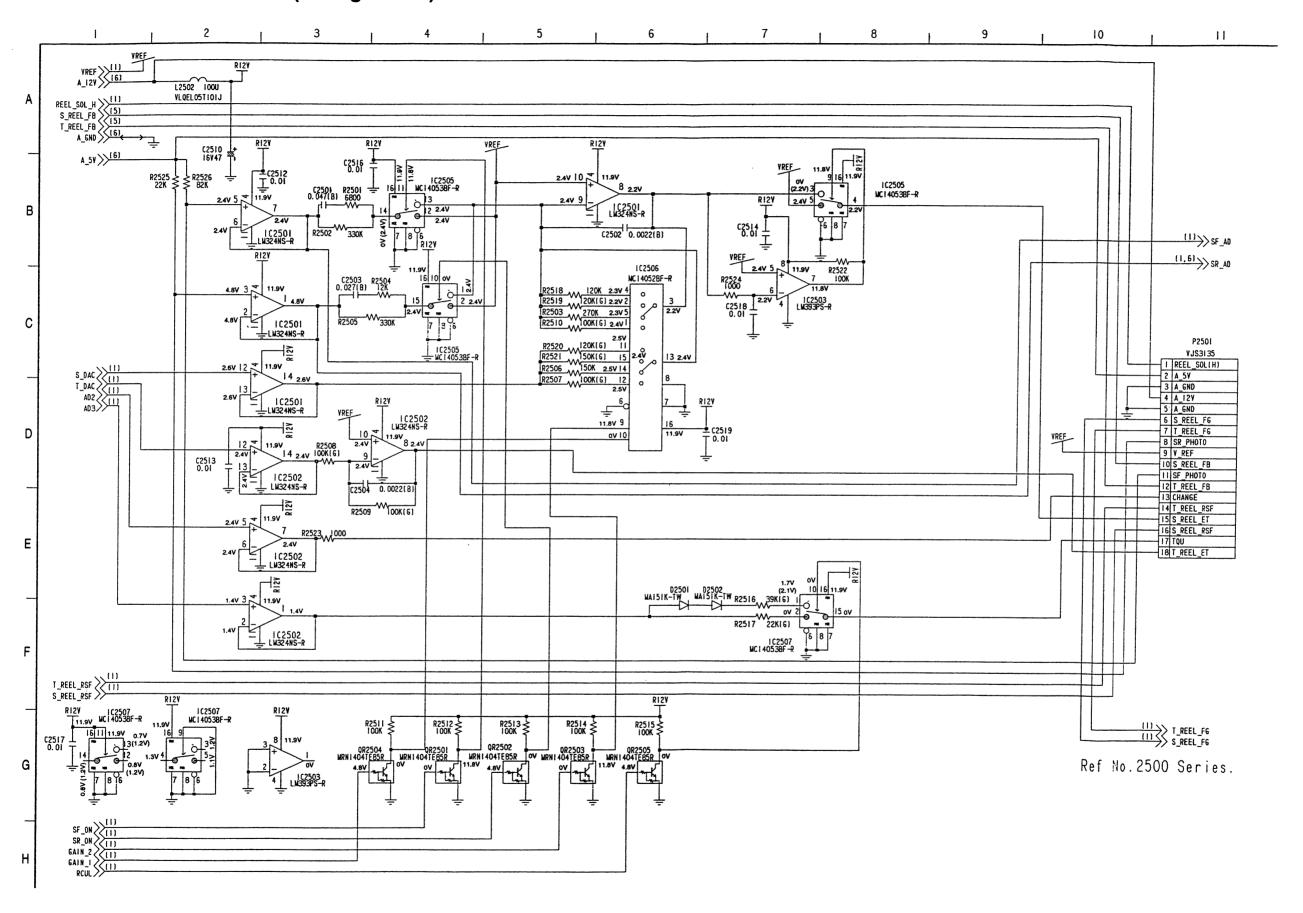
IC2301

	102001									
PIN No.	PLAY	REC	PIN No.	PLAY	REC					
1	12.5V	12.5V	13	3.5V	3.5V					
2	12.6V	12.6V	14	3.5V	3.5V					
3	0.3V	0.3V	15	1.1V	1.1V					
4	1.1V	1.1V	16	12.8V	12.8V					
5	oV	٥V	17	12.6V	12.6V					
6	2.4V	2.4V	18	oV	oV					
7	2.3V	2.3V								
8	0.5V	0.5V								
9	0.4V	0.4V								
10	2.5V	2.5V								
11	4.8V	4.8V								
12	3.5V	3.5V								

IC2302

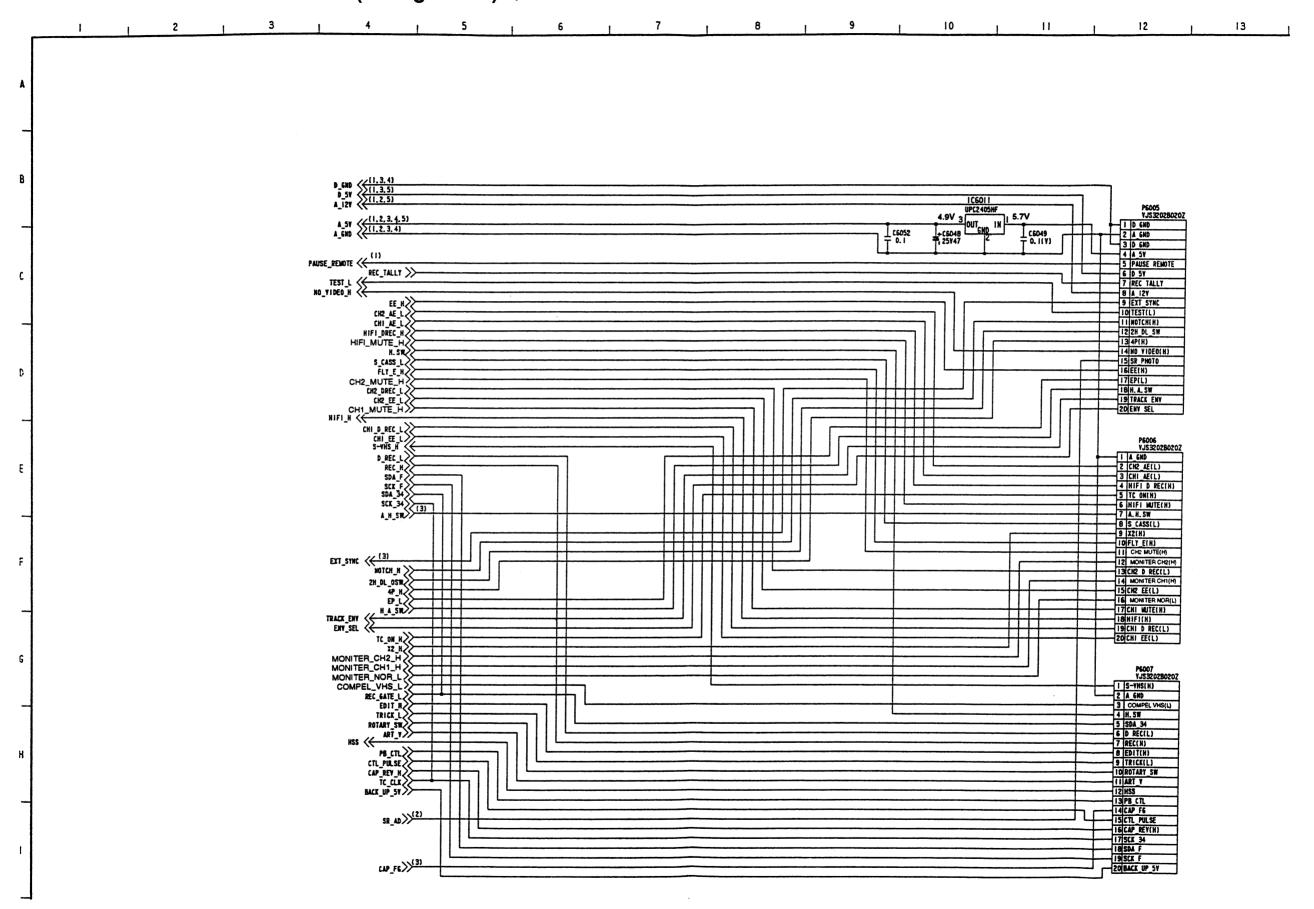
OLOOL									
PIN No.	PLAY	REC	PIN No.	PLAY	REC				
1			13	4.8V	4.8V				
2	oV	oV	14	3.4V	3.4V				
3	1.8V	1.8V	15	2.5V	2.5V				
4	1.4V	1.4V	16	2.4V	2.4V				
5	1.9V	1.9V	17	2.5V	2.5V				
6	1.9V	1.9V	18	0.5V	0.5V				
7	1.9V	1.9V	19	0.3V	0.3V				
8	1.9V	1.9V	20	oV	oV				
9	1.9V	1.9V	21	oV	oV				
10	1.9V	1.9V	22	0.6V	0.6V				
11	oV	οV	23						
12	οV	oV	24	9.3V	9.3V				

REEL SERVO SCHEMATIC DIAGRAM (E4: Page CBA-5) 2/6

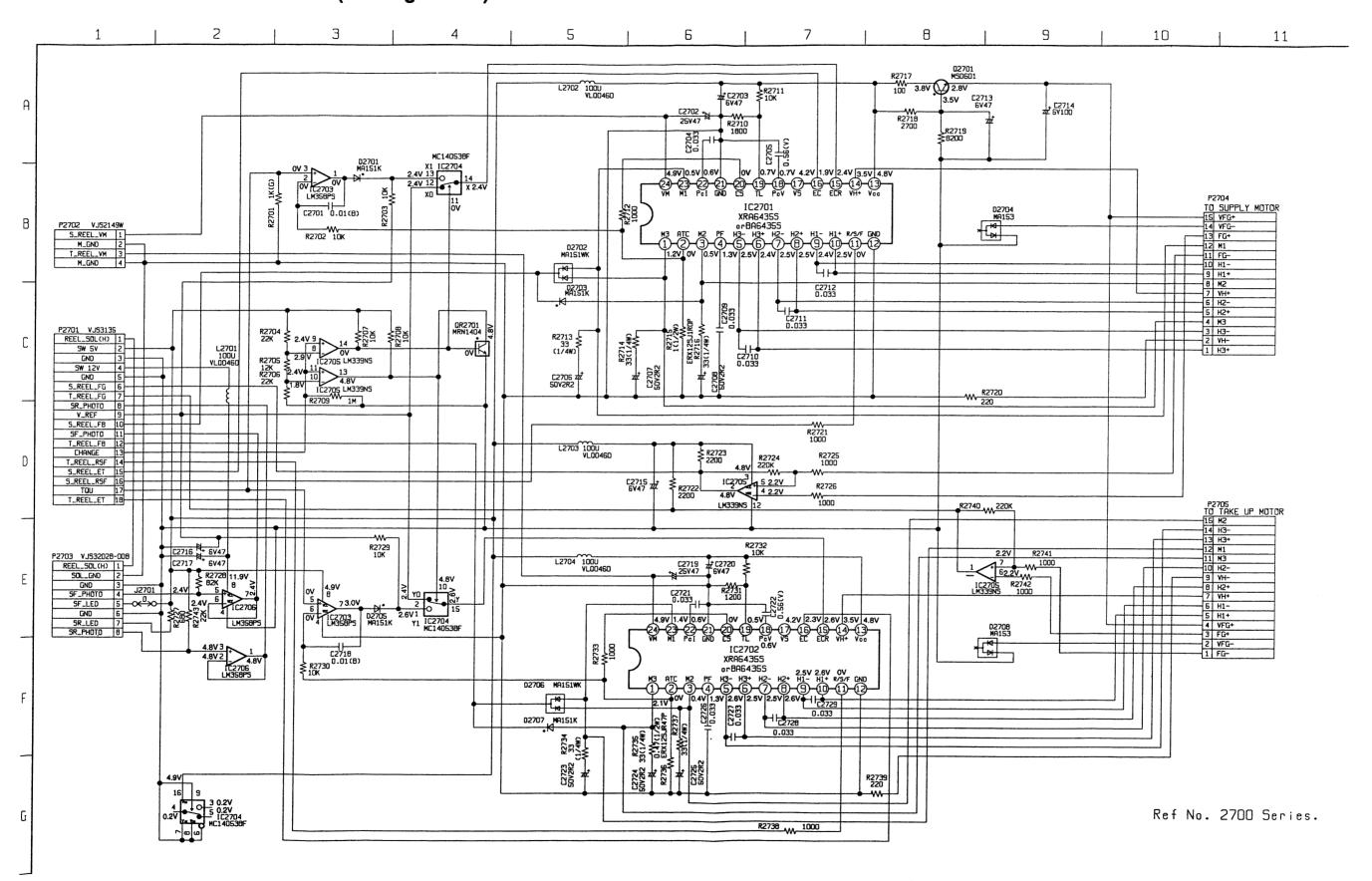


A_12Y>>> (6)

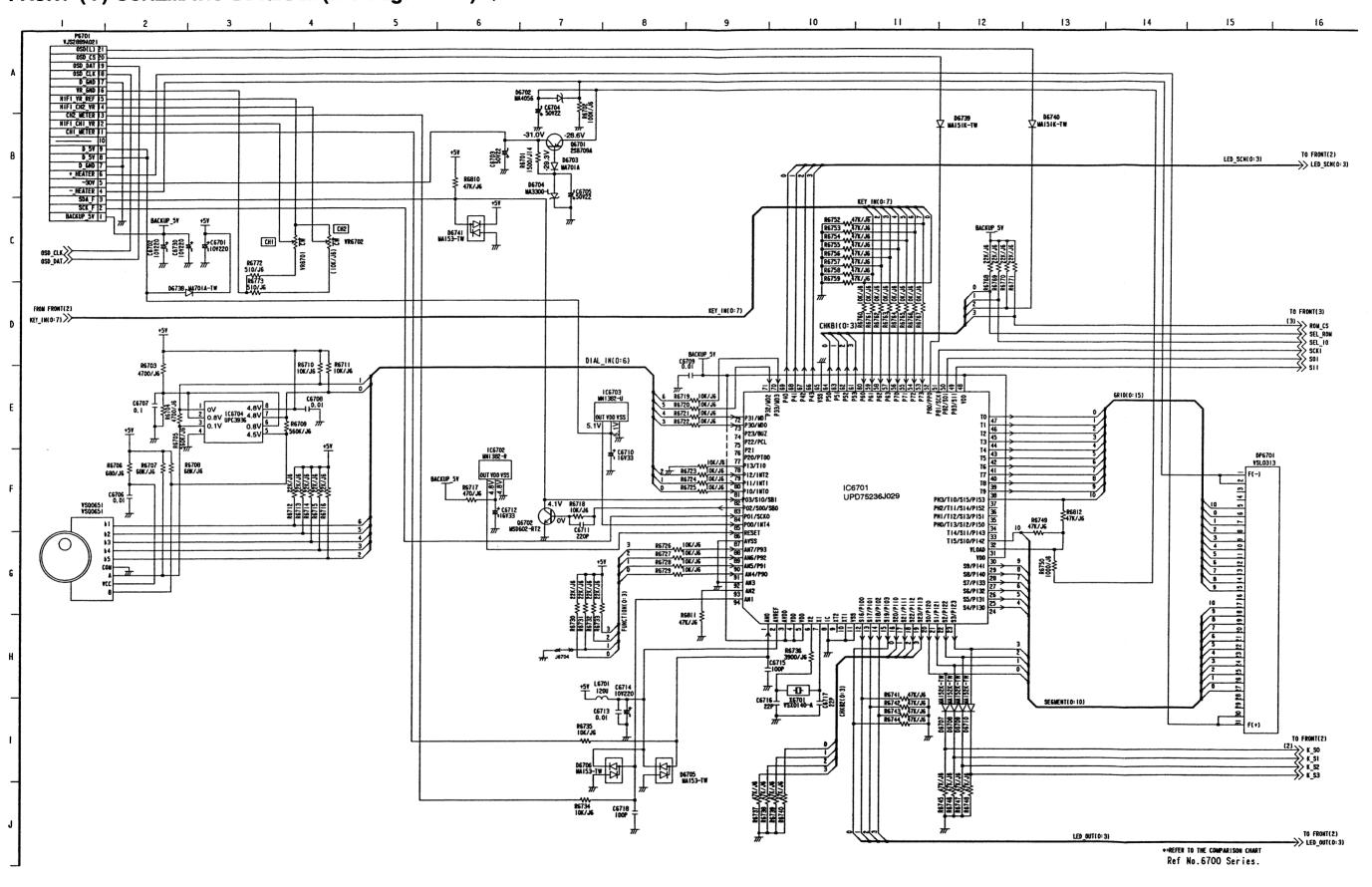
CONNECTION SCHEMATIC DIAGRAM (E4: Page CBA-5) 6/6

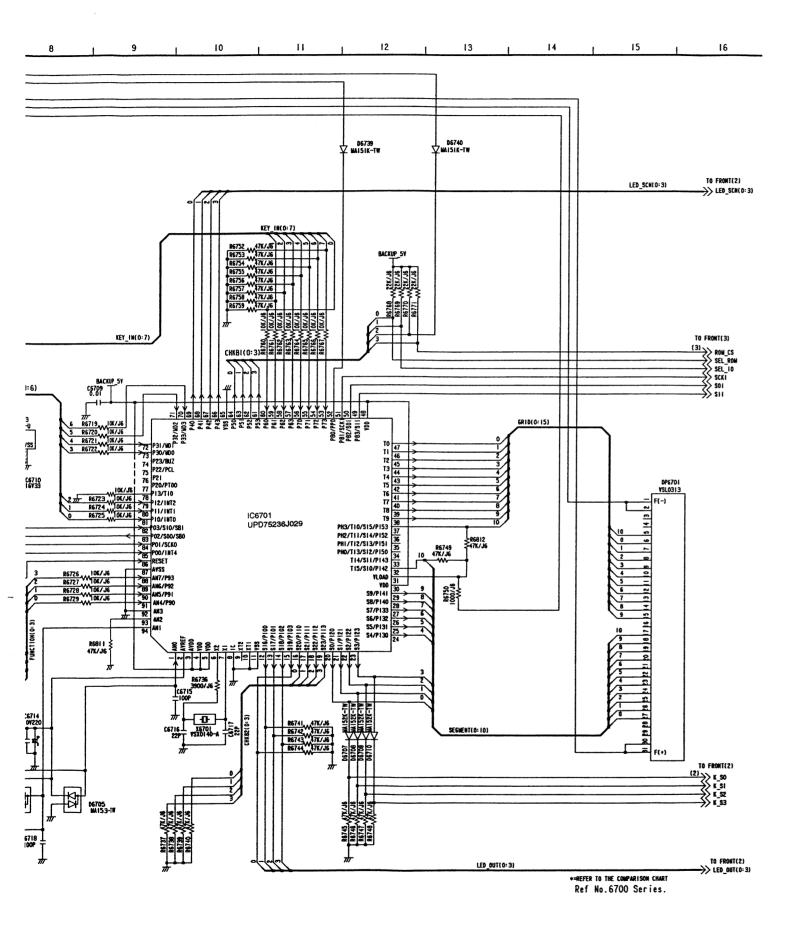


REEL DRIVE SCHEMATIC DIAGRAM (E11: Page CBA-3)



FRONT (1) SCHEMATIC DIAGRAM (E10: Page CBA-4) 1/4

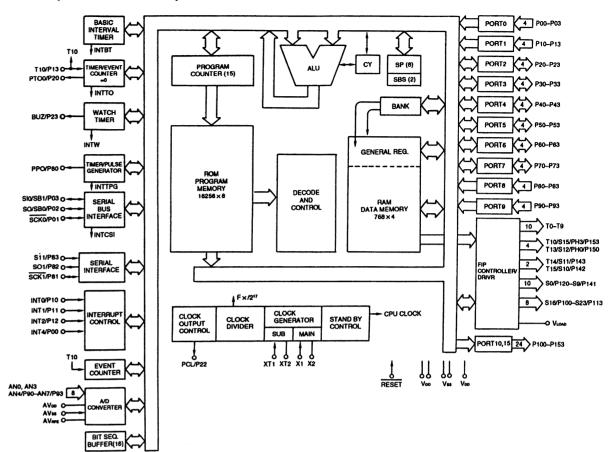




VIDE-V01109 / DRUCK 24

FRONT (2) and FRONT (3) FRONT 1

IC6701 (UPD75236J029)

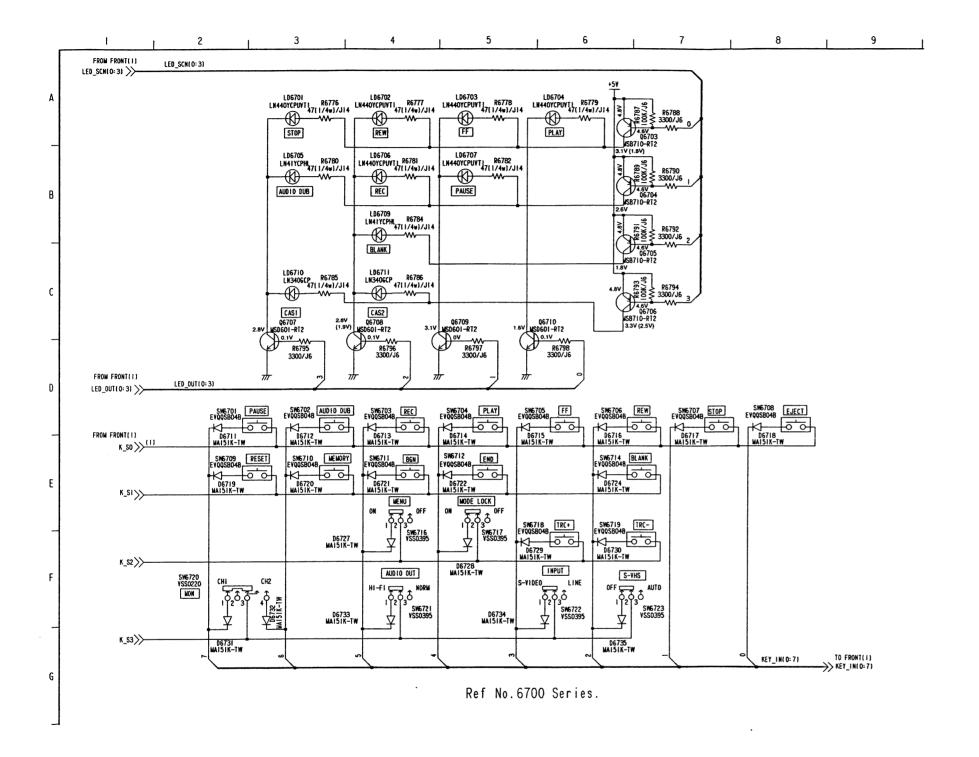


IC670	01							
PIN No.	PLAY	REC	PIN No.	PLAY	REC	PIN No.	PLAY	REC
1	0.2V	0V	33	0V	0V	65	0V	0V
2	4.8V	4.8V	34	0V	0V	66	3.7V	3.7V
3	4.8V	4.8V	35	0V	0V	67	3.6V	3.6V
4	4.8V	4.8V	36	0V	0V	68	3.7V	3.7V
5	4.8V	4.8V	37	-23.0V	-23.0V	69	3.7V	3.7V
6	2.3V	2.3V	38	-23.0V	-23.0V	70	0V	0V
7	2.1V	2.1V	39	-23.3V	-23.3V	71	4.8V	4.8V
8	0V	0V	40	-24.0V	-24.0V	72	4.8V	4.8V
9	4.8V	4.8V	41	-23.7V	-23.7V	73	4.8V	4.8V
10	0V	0V	42	-23.0V	-23.0V	74	0V	0V
11	0V	0V	43	-23.0V	-23.0V	75	2.1V	2.1V
12	OV	0V	44	-23.0V	-23.0V	76	0V	0V
13	4.5V	2.3V	45	-23.0V	-23.0V	77	0V	0V
14	4.5V	1.2V	46	-23.2V	-23.2V	78	0V	0V
15	OV	1.0V	47	-23.2V	-23.2V	79	4.8V	4.8V
16	0V	0V	48	4.8V	4.8V	80	0V	0V
17	0V	0V	49	4.8V	4.8V	81	4.8V	4.8V
18	0V	0V	50	0.1V	0.1V	82	4.0V	4.0V
19	0V	0V	51	4.7V	4.7V	83	0.6V	0.6V
20	-8.0V	-8.0V	52	4.4V	3.9V	84	4.5V	4.5V
21	-14.6V	-10.0V	53	0V	0V	85	5.1V	5.1V
22	-10.7V	-8.0V	54	0V	0V	86	4.8V	4.8V
23	-10.9V	-10.9V	55	OV	0V	87	0V	0V
24	-10.0V	-10.0V	56	OV	0V	88	4.8V	4.8V
25	-10.0V	-15.0V	57	٥٧	0V	89	4.8V	4.8V
26	-17.5V	-16.0V	58	2.7V	2.7V	90	0V	0V
27	-25.8V	-26.2V	59	0V	0V	91	4.8V	4.8V
28	-18.7V	-18.7V	60	0V	OV	92	OV	0V
29	-8.9V	-8.9V	61	οv	0V	93	OV	OV
30	4.8V	4.8V	62	4.8V	4.8V	94	1.5V	0V
31	-26.0V	-26.0V	63	οv	0V			
32	-23.7V	-23.7V	64	4.8V	4.8V			

SCM-11

FRONT (2) and FRONT (3) FRONT 1

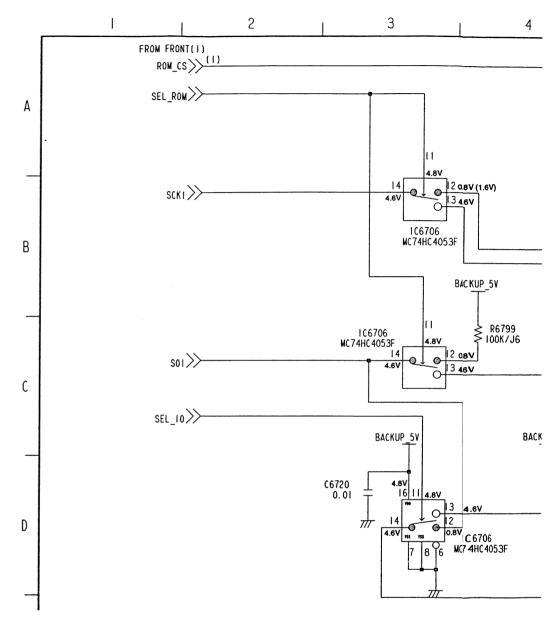
FRONT (2) SCHEMATIC DIAGRAM (E10: Page CBA-4) 2/4



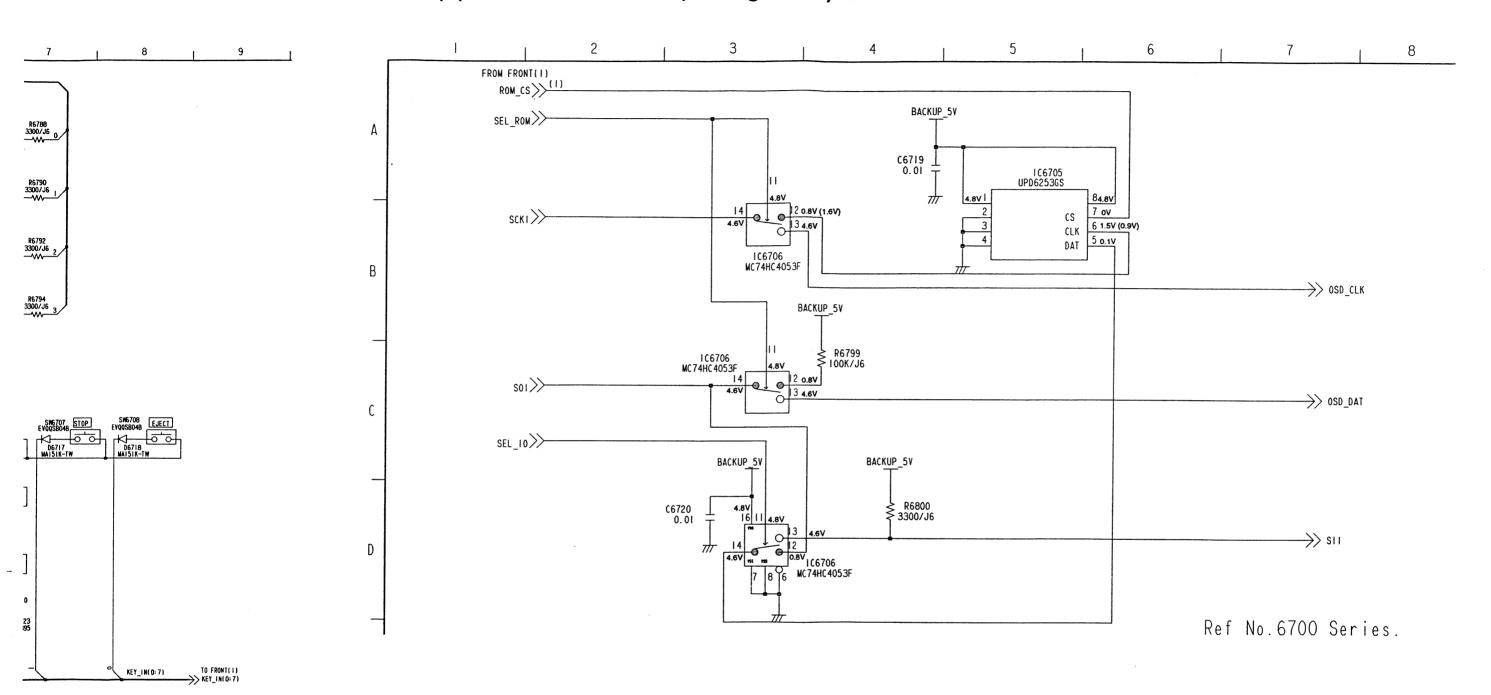
SCM-12

VIDE-V01109 / DRUCK 25

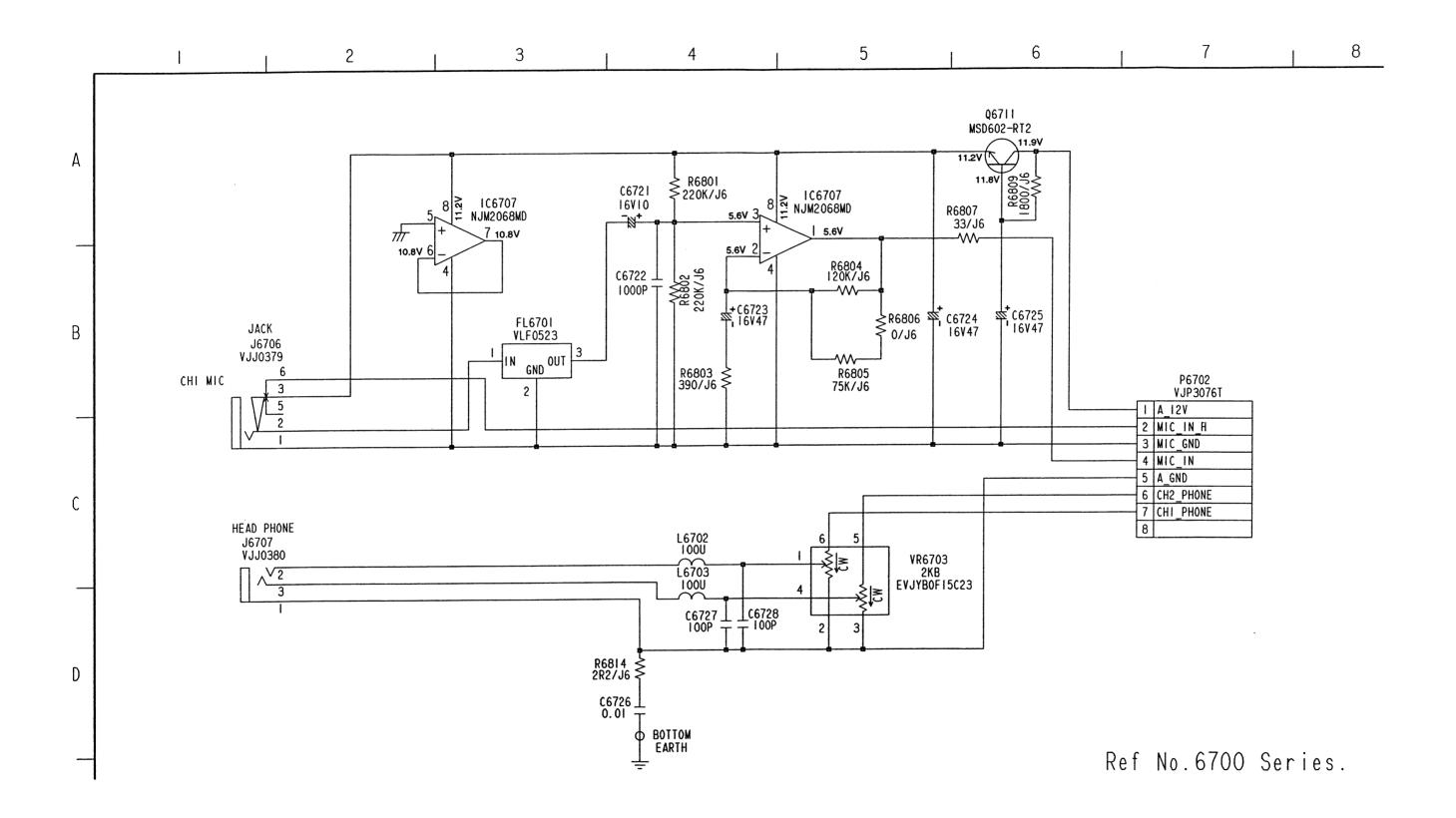
FRONT (3) SCHEMATIC DIAGRAM (E10: Page CBA-4) 3/4



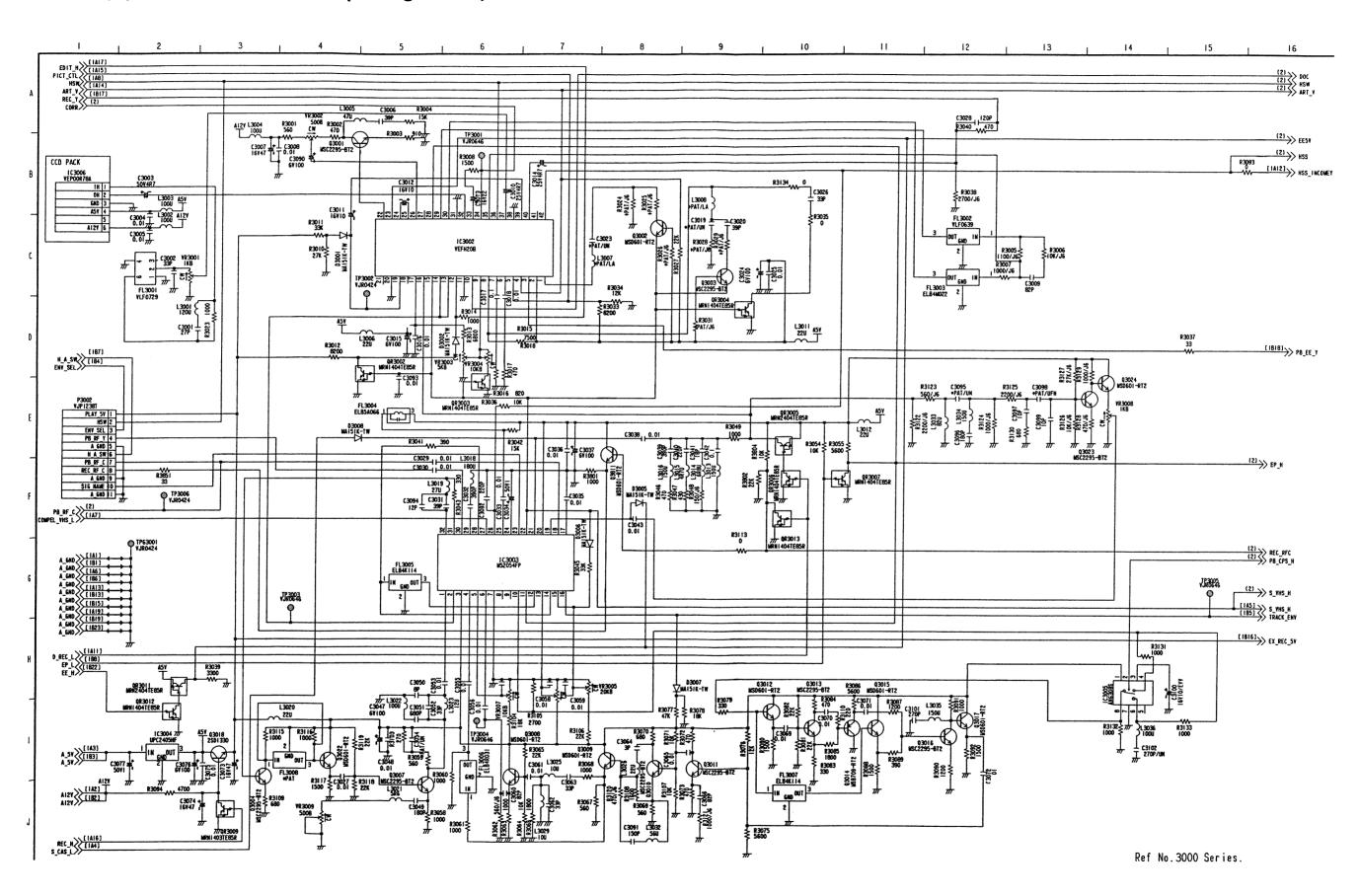
FRONT (3) SCHEMATIC DIAGRAM (E10: Page CBA-4) 3/4



FRONT (4) SCHEMATIC DIAGRAM (E10: Page CBA-4) 4/4



VIDEO (1) SCHEMATIC DIAGRAM (E5: Page CBA-7) 1/2



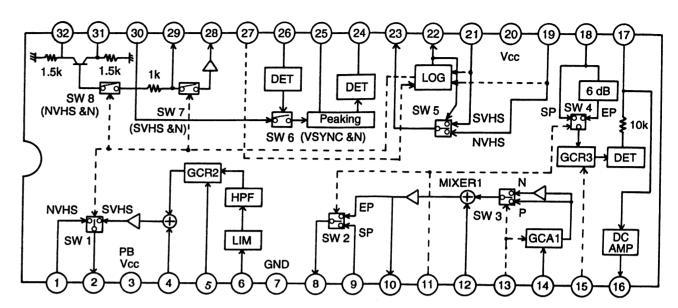
VIDEO 1 ICs DC VOLTAGE

REF NO.	T							IC3	200		•				-	
			1 2		T -	1 0				1 40	1 44	140	1 40	1 44	1	1.0
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	2.9	4.8	2.3	0	2.8	1.9	1.3	1.7	1.0	4.8	0	2.3	2.5	2.5	0.2	4.8
REC	2.9	4.8	2.3	0	2.8	1.9	4.3	1.7	1.0	1.2	0	0	0	0	0.2	3.4
REF NO.								IC30	002							
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	4.8	3.0	1.8	0	4.8	3.2	0.5	1.2	2.9	2.8	4.8	0	1.8	1.8	0	1.4
REC	4.8	3.0	1.8	0	2.1	3.2	4.9	1.2	2.9	2.8	4.8	0	1.8	1.8	0	1.4
REF NO.								IC30	002							
PIN NO.	33	34	35	36	37	38	39	40	41	42						
PLAY	2.7	2.0	1.7	4.7	2.1	0	2.3	3.3	0.3	0.4						
REC	2.7	2.0	2.0	4.7	2.1	0	2.3	2.8	0.3	0.4						
REF NO.								IC30	003							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14 .	15	16
PLAY	3.9	2.5	0	0	0.7	3.2	0	1.3	2.8	1.9	0	2.5	2.6	2.5	1.4	2.0
REC	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF NO.								IC30	03							
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	3.1	2.8	1.0	4.9	4.5	0.1	0.3	2.7	3.9	0.4	4.8	2.5	1.9	3.3	1.2	3.4
REC	0	0	2.4	4.9	4.5	0	1.6	2.5	4.3	0.4	4.8	0	0	0	0	0
REF NO.								IC30	04							
PIN NO.	1	2	3													
PLAY	5.7	0	4.9													
REC	5.7	0	4.9													

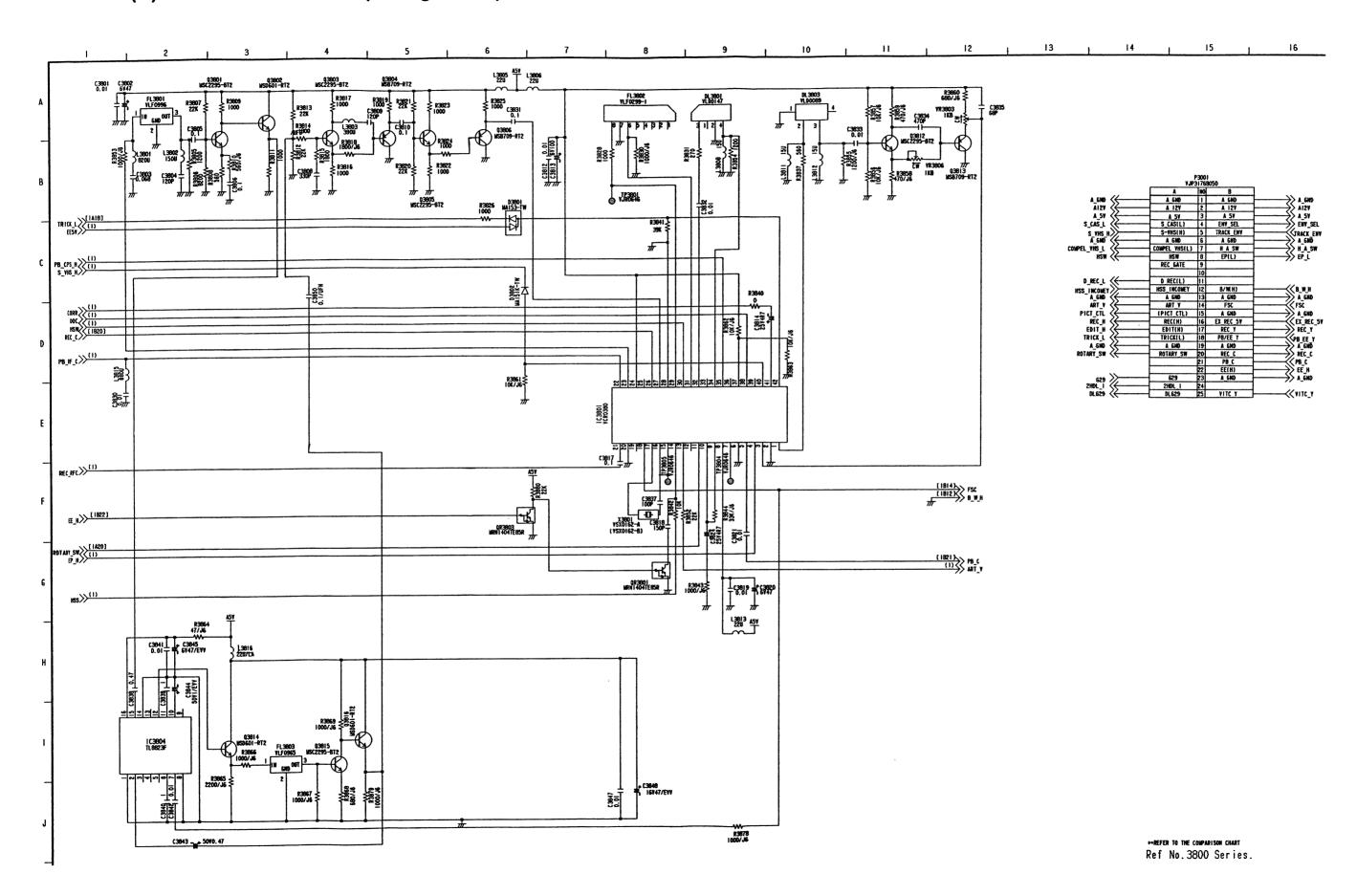
VIDEO 1 TRANSISTORS DC VOLTAGE

REF NO.		Q3001			Q3002			Q3003			Q3004			Q3005	
	Ε	С	В	E	С	В	E	С	В	E	С	В	E	С	В
PLAY	2.5	7.6	3.2	0.1	0.1	0.8	0.1	0.2	0.8	0.5	4.2	1.2	0	0	0.4
REC	2.5	7.6	3.2	0.1	0.1	0.8	0.1	0.2	0.8	0	0.1	0	0	0	0.4
REF NO.		Q3006			Q3007			Q3008			Q3009			Q3010	
	Ε	С	В	E	С	В	E	С	В	E	С	В	E	С	В
PLAY	0	0	0.4	1.4	3.8	2.1	0.8	4.7	1.4	0.7	4.7	1.3	1.4	2.9	2.1
REC	0	0	0.4	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1	0
REF NO.		Q3011			Q3012			Q3013			Q3014			Q3015	
	E	С	В	E	С	В	E	С	В	E	C	В	E	С	В
PLAY	0.6	4.0	1.4	1.3	4.7	1.9	1.1	3.1	1.8	1.7	0	1.1	1.3	4.7	1.9
REC	0	0.1	0	0	0.1	0	0	0.1	0	0.1	0	0	0	0.1	0
REF NO.		Q3016			Q3017			Q3018			Q3022			Q3811	
	E	С	В	E	С	В	E	С	В	E	С	В	E	С	В
PLAY	0.5	3.3	1.3	2.7	4.7	3.3	4.8	4.9	5.5	3.5	4.7	4.2	0	4.9	0
REC	0	0.1	0	0	0.1	0.1	0.1	4.9	0	0	0.1	0.1	2.6	4.9	3.2
REF NO.		QR3002		1	QR3003		4	QR3004	ļ		QR3005			QR3006	
	Ε	С	В	E	С	В	E	С	В	E	C	В	E	С	В
PLAY	0	2.9	0.1	0	1.0	0.1	0	0.2	0.2	4.9	4.8	0	0	0	4.8
REC	0	0.1	0.1	0	1.0	0.1	0	0.2	0.2	4.9	3.4	4.8	0	4.8	0
REF NO.		QR3007		(QR3009			QR3010)		QR3011			QR3012	
	E	С	В	Ε	C	В	Ε	C	В	E	С	В	E	С	В
PLAY	0	0	4.0	0	5.5	0	0	0	5.0	4.9	0.5	4.9	0	4.9	0
REC	0	0	4.0	0	0	4.8	0	0	5.0	4.9	4.9	0	0	0	4.7
REF NO.		QR3013													
	Ε	С	В												
PLAY	0	0	4.8												
REC	0	3.2	0												

IC3003 (M52054FP)



VIDEO (1) SCHEMATIC DIAGRAM (E5: Page CBA-7) 2/2

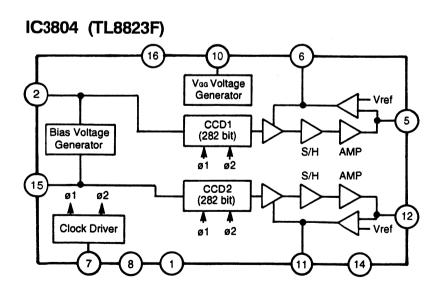


VIDEO 1 ICs DC VOLTAGE CHART (Ref. No 3800 Series)

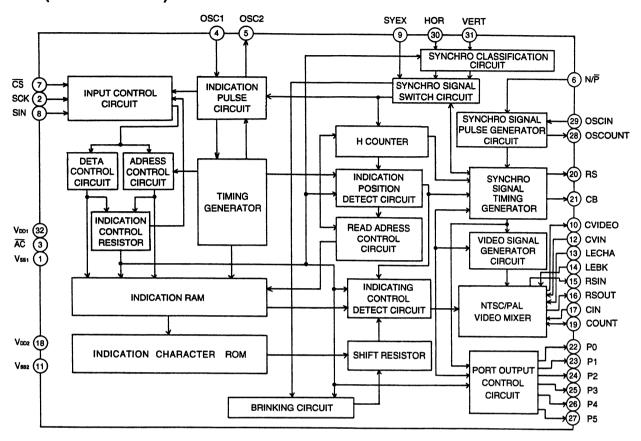
REF NO.								IC38	301							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	3.0	0.5	0	2.0	0	2.3	4.8	3.0	3.0	3.4	0.3	0.8	1.2	3.5	3.8
REC	0	3.2	0.5	0	4.2	0	4.1	4.8	3.0	3.0	4.7	0.3	0.8	1.2	3.5	3.8
REF NO.		IC3801														
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	0	1.7	0	0	2.5	2.1	0	4.6	0	1.8	2.1	0	2.1	4.7	0	0
REC	0	1.7	0	0	2.0	0	0	4.6	0	1.8	2.1	0	1.8	4.7	0	0
REF NO.								IC38	301							
PIN NO.	33	34	35	36	37	38	39	40	41	42						
PLAY	3.1	0.5	2.4	2.9	3.2	4.8	2.4	1.3	2.4	2.0						
REC	3.4	0.5	4.1	3.2	2.8	1.2	3.9	1.3	3.9	4.3						

VIDEO 1 TRANSISTORS DC VOLTAGE CHART (Ref. No 3800 Series)

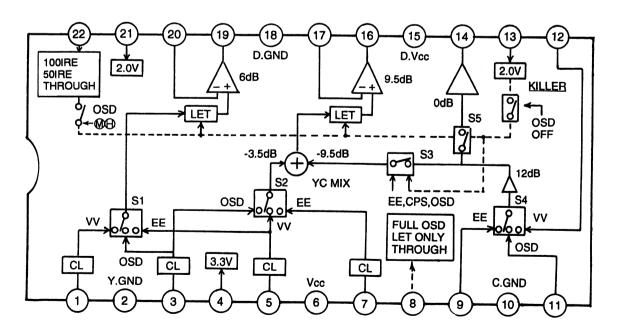
REF NO.		Q3801			Q3802			Q3803			Q3805			Q3806	
	Ε	С	В	E	С	В	E	С	В	E	С	В	Е	С	В
PLAY	0.4	3.9	1.2	3.2	4.8	3.9	1.4	3.3	2.2	1.5	3.3	2.2	2.1	0	1.5
REC	0.4	3.9	1.2	3.2	4.8	3.9	1.4	3.3	2.2	1.5	3.3	2.2	2.1	0	1.5
REF NO.	Q3807				Q3808			Q3809			QR3801			QR3802	
	E	С	В	E	С	В	E	С	В	E	С	В	E	С	В
PLAY	0.5	0	0	0.5	0	0	0.5	0	0	0	0	4.8	0	0	4.7
REC	0.5	0	0	0.5	0	0	0.5	0	0	0	0.5	0.1	0	0	4.7



IC3301 (M50458-001FP)



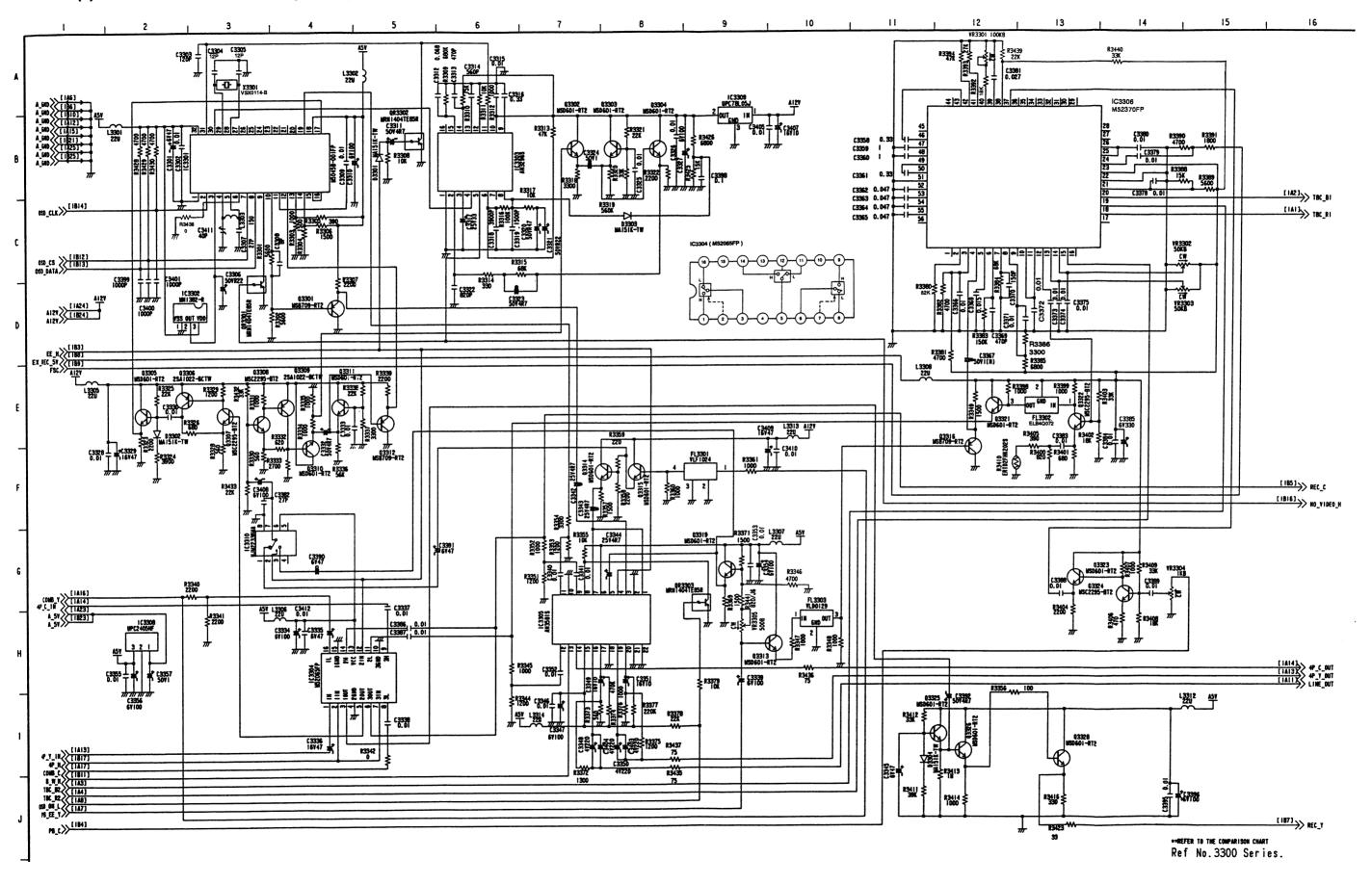
IC3305 (AN3581N)



REF

PL

VIDEO (2) SCHEMATIC DIAGRAM (E6:Page CBA-8)



VIDEO 2 ICs DC VOLTAGE CHART

REF NO.								IC3	301							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	4.7	0	2.2	2.1	4.8	0	0.1	4.8	2.6	0	0	0	2.3	1.9	1.9
REC	0	4.7	0	2.2	2.1	4.8	4.1	0.1	4.8	2.6	0	2.6	3.4	2.3	1.9	1.9
REF NO.								IC3	301							
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	0	0	1.7	0.3	0.3	0	0	0	0	0	0	2.2	2.2	3.4	4.8	4.9
REC	1.8	4.9	1.7	0.7	0.7	0	0	0	0	0	0	2.2	2.2	3.4	4.8	4.9
REF NO.			•					IC3	302							
PIN NO.	1	2	3													
PLAY	0	4.9	4.9													
REC	0	4.9	4.9													
REF NO.								IC3	303							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	3.3	4.1	3.4	0.1	2.9	0	2.9	2.2	5.0	4.8	0.6	0	1.3	3.7	4.1
REC	0	3.3	4.1	3.4	0.1	2.9	0	2.9	2.2	5.0	4.8	0.6	0	1.3	3.7	4.1
REF NO.								IC3	304							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	1.9	0	1.9	0	1.9	1.8	0	1.9	1.9	0	1.9	0	4.9	1.9	0	1.9
REC	1.9	0	1.9	0	1.9	1.8	0	1.9	1.9	0	1.9	4.7	4.9	1.9	0	1.9
REF NO.								IC3	305							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	2.3	0	2.4	0	2.3	4.8	2.3	0	1.9	0	1.9	1.9	0.3	2.3	4.9	2.2
REC	2.3	0	2.4	4.7	2.3	4.8	2.3	0	1.9	0	1.9	1.9	0.3	2.3	4.9	2.2
REF NO.								IC3	305							
PIN NO.	17	18	19	20	21	22										
PLAY	1.5	0	2.0	1.6	0	0										
REC	1.5	0	2.0	1.6	0	0										
REF NO.								IC33	306							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	2.4	2.3	2.6	2.0	2.5	2.8	0	1.7	2.0	2.0	1.5	1.0	1.2	2.6	0
REC	0	0	0	0.3	0.1	0	0	0	0.1	0	0	0	0	0	0.1	0
REF NO.								IC33	306							
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	0	1.7	2.7	1.8	3.3	0	4.6	2.6	2.3	2.2	0	0	0	0	0	0
REC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF NO.								IC33	306							
PIN NO.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
PLAY	0	0	0	0	2.7	0	2.6	2.4	2.4	2.5	2.0	0	0	3.3	1.9	1.9
REC	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0
REF NO.								IC33	306							
PIN NO.	49	50	51	52	53	54	55	56								
PLAY	2.0	3.3	0	2.9	2.9	0	2.9	0								
REC	0	0	0	0	0	0	0	0								
REF NO.		IC3308			IC3309						IC3310					
PIN NO.	11	2	3	1	2	3	1	2	3	4	5	6	7	8		
PLAY	5.7	0	4.9	11.9	5.0	0	2.9	0	2.9	0	0	4.9	2.1	0		
REC	5.7	0	4.9	11.9	5.0	0	2.9	4.7	2.9	0	0	4.9	2.1	0		

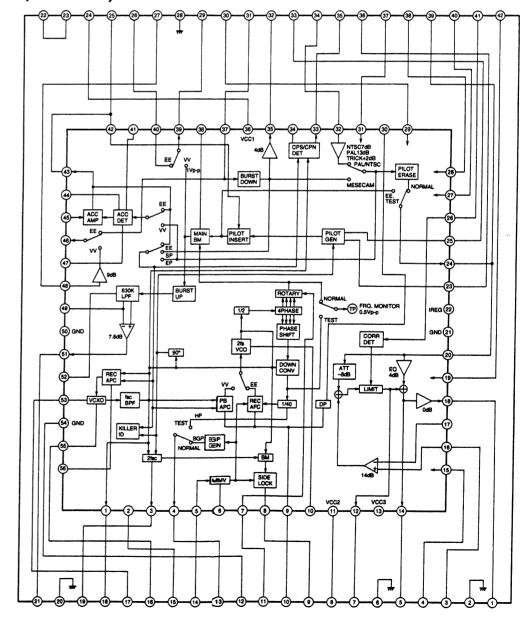
VIDEO 2 TRANSTORS DC VOLTAGE CHART

REF NO.		Q3301			Q3302			Q3303			Q3304			Q3305	
	E	С	В	E	С	В	E	С	В	E	С	В	E	С	В
PLAY	1.9	0	1.3	2.9	5.0	3.5	2.9	5.0	3.0	2.3	5.0	2.9	1.7	11.8	2.2
REC	1.9	0	1.3	2.9	5.0	3.5	2.9	5.0	3.0	2.3	5.0	2.9	1.7	11.8	2.2
REF NO.	Q3306				Q3307			Q3308			Q3309			Q3310	
	E	С	В	E	С	В	E	С	В	E	С	В	E	С	В
PLAY	11.8	2.4	11.1	1.2	11.1	1.9	3.8	11.1	4.5	11.8	7.7	11.1	7.0	11.8	7.7
REC	11.8	2.4	11.1	1.2	11.1	1.9	3.8	11.1	4.5	11.8	7.7	11.1	7.0	11.8	7.7

VIDEO 2 TRANSISTORS DC VOLTAGE CHART

REF NO.		Q3311			Q3312			Q3313			Q3314			Q3315	
	E	С	В	E	С	В	E	С	В	Е	С	В	E	С	В
PLAY	1.9	11.8	1.5	2.6	0	1.9	3.0	4.8	3.6	1.5	11.9	2.1	2.3	11.9	2.9
REC	1.9	11.8	1.5	2.6	0	1.9	3.0	4.8	3.6	1.5	11.9	2.1	2.3	11.9	2.9
REF NO.		Q3316			Q3319			Q3321			Q3322			Q3323	
	Ε	С	В	Ε	С	В	E	С	В	E	С	В	Ε	С	В
PLAY	2.1	0	1.5	3.0	4.8	3.7	4.0	4.6	4.6	0.7	3.5	1.4	2.5	4.6	3.0
REC	0.1	0	1.5	3.0	4.8	3.7	0	0.1	0.1	0	0.1	0	0	0.1	0.1
REF NO.		Q3324			Q3325			Q3326			Q3328				
	Ε	С	В	E	С	В	Ε	С	В	E	С	В			
PLAY	0.6	3.0	1.4	2.7	4.9	2.8	2.1	4.9	2.7	1.4	4.9	2.1			
REC	0	0.1	0	2.7	4.9	2.8	2.1	4.9	2.7	1.4	4.9	2.1			
REF NO.		QR3301			QR3302			QR3303							
	Ε	С	В	E	С	В	Ε	С	В						
PLAY	0	4.8	0.1	0	4.8	0	0	0	2.9						
REC	0	4.8	0.1	0	4.8	0	0	0	2.9						

IC3306 (M52370FP)



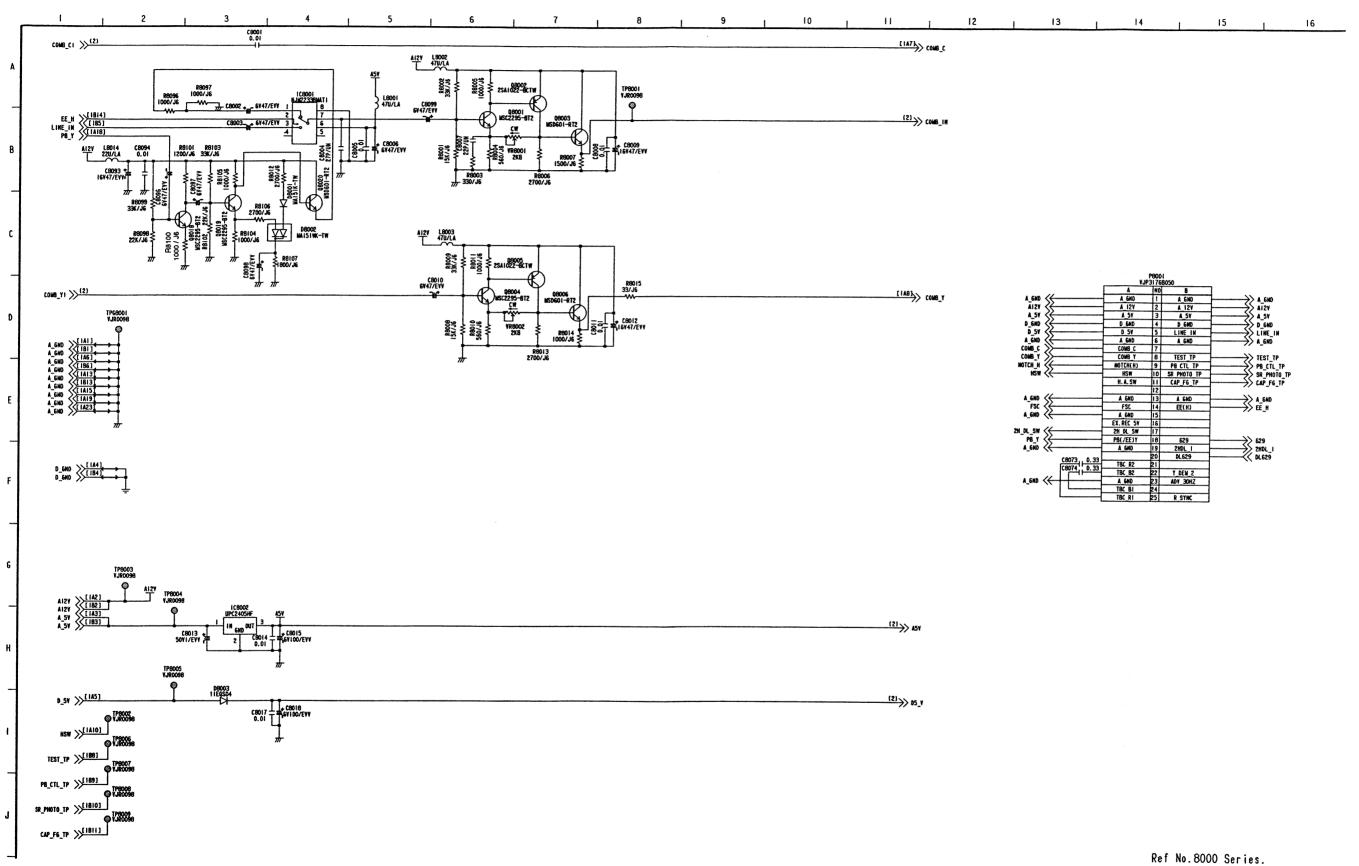
> REC_Y

AP_C_OUT
AP_Y_OUT
LINE_OUT

> TBC_BI

> REC_C

VIDEO (3) SCHEMATIC DIAGRAM (E7: Page CBA-9) 1/2



VIDEO 3 REF NO.

PIN NO. PLAY REC

VIDEO 3 REF NO.

PLAY REC REF NO.

PLAY

REC

VIDEO 3 ICs DC VOLTAGE (Ref No. 8000 Series)

VIDE-V01109 / DRUCK 34

									-					
REF NO.				IC80	001					IC8002			 	
PIN NO.	1	2	3	4	5	6	7	8	1	2	3			T
PLAY	2.9	0	2.9	0	0	4.9	2.2	0	5.7	0	4.9			
REC	2.9	4.7	2.9	0	0	4.9	2.2	0	5.7	0	4.9		1	

VIDEO 3 TRANSISTORS DC VOLTAGE (Ref No. 8000 Series)

							•								
REF NO.		Q8001		<u> </u>	Q8002			Q8003			Q8004			Q8005	
	Ε	С	В	Е	С	В	E	С	В	E	С	В	E	С	В
PLAY	2.9	11.1	3.6	11.8	6.7	11.1	6.1	11.8	6.7	2.9	11.1	3.6	11.8	6.8	11.1
REC	2.9	11.1	3.6	11.8	6.7	11.1	6.1	11.8	6.7	2.9	11.1	3.6	11.8	6.8	11.1
REF NO.		Q8006			Q8018			Q8019			Q8020				.
	Ε	С	В	E	С	В	E	С	В	E	С	В	E	С	В
PLAY	6.1	11.8	6.8	3.5	7.6	4.2	3.5	8.3	4.2	7.7	11.9	8.3			
REC	6.1	11.8	6.8	3.5	7.6	4.2	3.5	8.3	4.2	7.7	11.9	8.3			

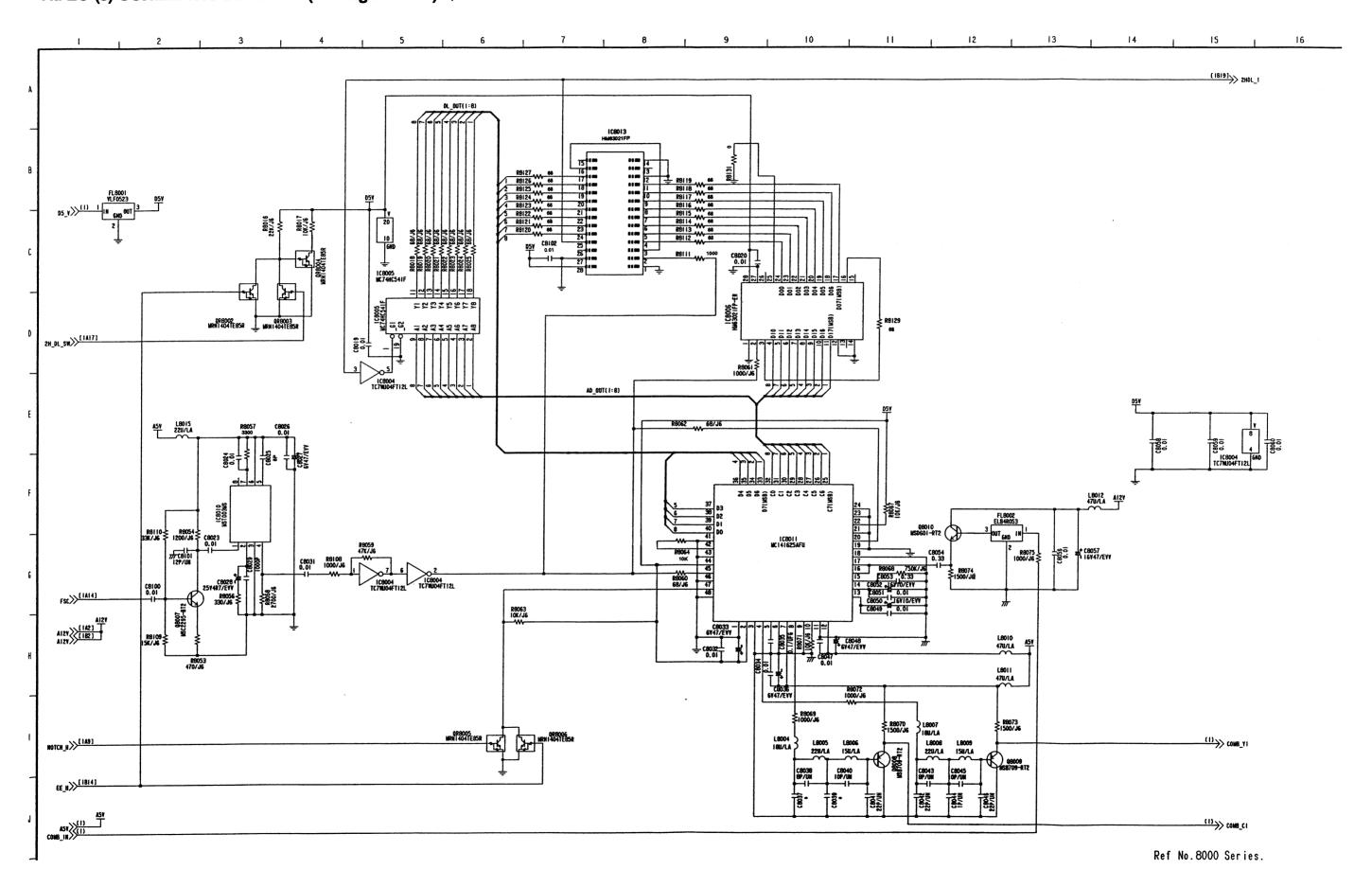
VIDEO 3 ICs DC VOLTAGE (Ref No. 8000 Series) REF NO. IC80C4

REF NO.	Ι				`				3004							
PIN NO.	1	2	3	1 4	5	6	7	T 8	T -	Т	T	Т	T	Т	Т	Τ
PLAY	2.4	2.3	3.3	0	0.1	2.4	2.4	4.8	+	+	 	+	+	┪	+	+
REC	2.4	2.3	3.3	0	0.1	2.4	2.4	4.8	+	+	+	+	1	1	+	
REF NO.		1	1		1	1			3005							1
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0.1	1.5	2.2	2.1	2.2	2.6	2.2	2.2	2.3	0	2.4	2.2	2.4	2.5	2.0	2.1
REC	0.1	1.8	2.6	1.9	2.0	2.8	2.2	1.7	2.6	0	2.4	2.3	2.4	2.7	2.1	1.8
REF NO.					-			IC8	005					1		1
PIN NO.	17	18	19	20					T	T	T	T	T			1
PLAY	2.2	1.5	0	4.8						1	1	1				1
REC	2.7	1.8	0	4.8						1	1	1	1	1	1	†
REF NO.								IC8	006							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	2.3	4.8	2.3	0	2.2	2.5	2.3	2.0	2.2	1.5	0	4.3	0	4.5	4.5
REC	0	2.3	4.8	2.6	1.7	0	2.7	2.0	1.8	2.6	1.8	0	4.3	0	4.5	4.5
REF NO.								IC8	006							
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28				
PLAY	1.5	2.2	2.1	2.3	2.6	2.3	2.3	2.3	3.3	4.4	0	4.8				
REC	1.8	2.7	1.7	1.7	2.1	2.3	1.8	0	3.3	4.3	0	4.8				
REF NO.								IC8	800							
PIN NO.	1	2	3	4	5											
PLAY	2.4	4.5	0	4.8	4.8											
REC	2.4	4.3	0	4.8	4.8											
REF NO.						·		IC80	010							
PIN NO.	1	2	3	4	5	6	7	8								
PLAY	2.5	2.0	0	2.6	3.1	4.8	0	0								
REC	2.5	2.0	0	2.6	3.1	4.8	5.4	0								
REF NO.								IC80	011							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	4.9	0	0.8	1.4	0	4.8	0.7	0	1.1	0	4.8	4.4	0	2.9	0
REC	0	4.8	0	0	1.4	0	0	0.8	0	1.1	0	4.8	4.4	1.4	2.8	2.9
REF NO.								IC80								
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	2.6	0	0	2.3	0	0	0	0	1.5	2.2	2.1	2.2	2.7	2.2	2.2	2.2
REC	2.9	0	0	2.3	0	4.8	0	0	1.8	2.6	1.7	2.0	2.7	2.2	1.7	0
REF NO.								IC80								
PIN NO.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
PLAY	1.5	2.3	2.1	2.2	2.7	2.2	2.3	2.3	0	4.8	0	4.8	2.3	0	4.8	0
REC	1.9	0	1.6	2.0	2.8	2.2	1.8	2.7	0	4.8	0	4.8	2.3	0	0	0

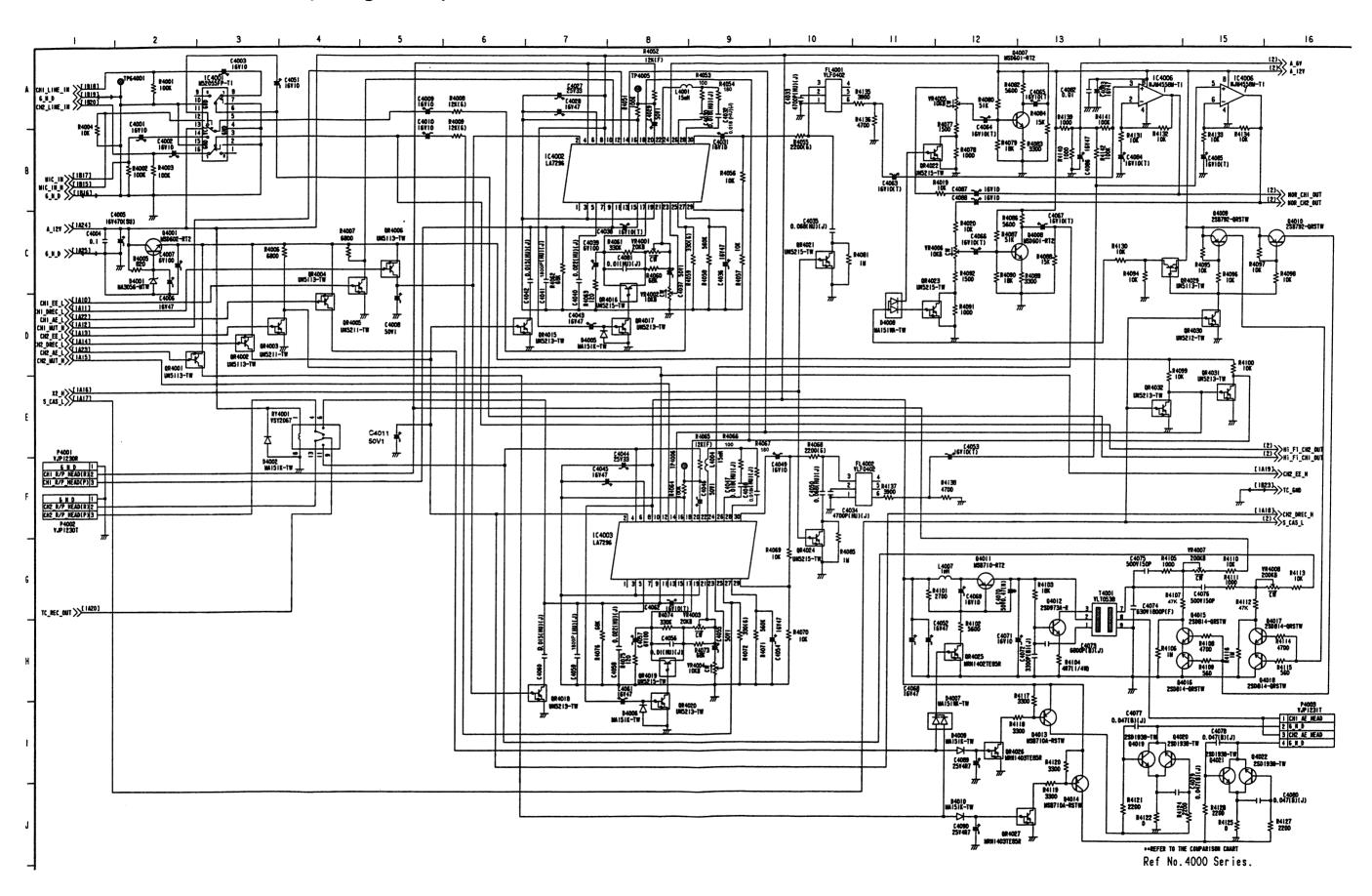
VIDEO 3 TRANSISTORs DC VOLTAGE (Ref No. 8000 Series)

REF NO.		Q8007			Q8008			Q8009			Q8010				
	E	С	В	E	С	В	E	С	В	E	С	В			
PLAY	1.0	2.2	1.8	1.4	0	0.7	1.4	0	0.8	5.5	11.9	0.1			
REC	1.0	2.2	1.8	1.4	0	0.7	1.4	0	0.8	5.5	11.9	0.1		1	
REF NO.	QR8002				QR8003			QR8004	1		QR8005			QR8006	;
	E	С	В	Ε	С	В	E	С	В	E	С	В	E	С	В
PLAY	0	0	0	0	0	4.8	0	3.3	0	0	4.8	0	0	4.8	0
REC	0	0	4.7	0	0	4.8	0	3.3	0	0	0	0	0	0	4.7

VIDEO (3) SCHEMATIC DIAGRAM (E7:Page CBA-9) 2/2



AUDIO 1 SCHEMATIC DIAGRAM (E8: Page CBA-6)



AUDIO 1 ICs DC VOLTAGE CHART

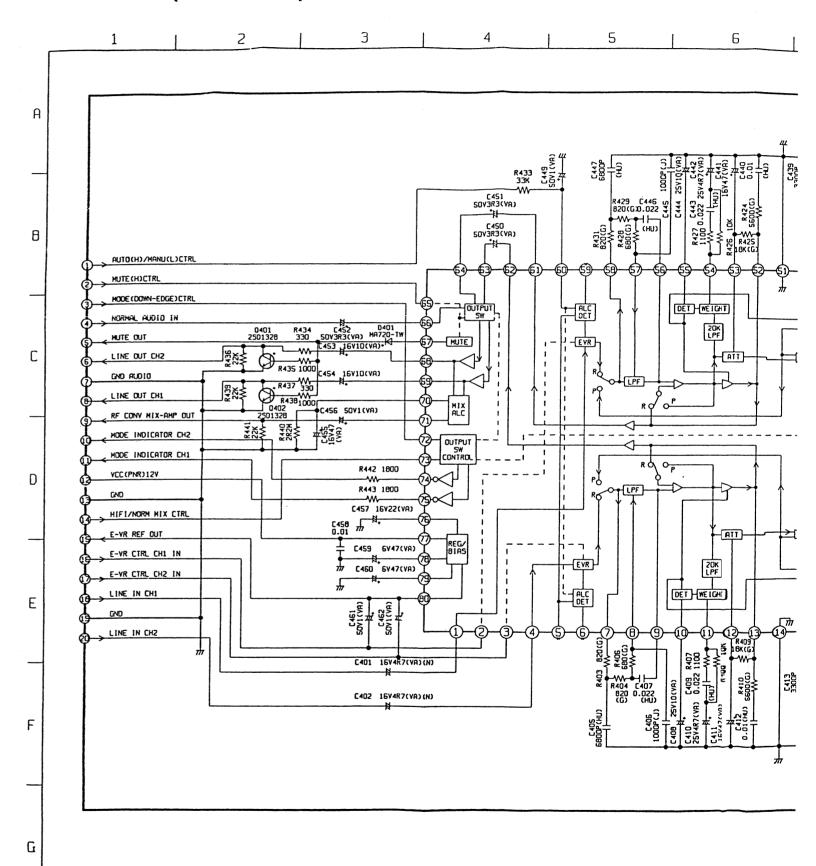
REF NO.								IC4	001							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	5.8	0	4.4	0	4.4	4.4	0	5.8	5.8	0	5.8	0	11.9	5.8	0	5.8
REC	5.8	0	4.4	0	4.4	4.4	0	5.8	5.8	0	5.8	0	11.9	5.8	0	5.8
REF NO.								IC40	002							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0.1	0	0	0	7.9	9.0	0	11.9	0	0	0	0	0	0	2.1	0
REC	1.4	4.9	0	0	7.9	9.0	0	11.9	0	4.7	0	0	0	0	2.1	0
REF NO.								IC40	002							
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
PLAY	2.2	4.0	0	3.8	2.2	1.2	0	0	0	0	0.2	0	0	4.0		
REC	2.2	4.0	0	3.8	2.2	1.2	0	0	0	0	0	0	0	4.0		
REF NO.		-						IC40	003							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0.2	0	0	0	7.9	8.9	0	11.9	0	0	0	0	0	0	2.1	0
REC	11.4	14.9	0	0	7.9	8.9	0	11.9	0	4.7	0	0	0	0	2.1	0
REF NO.								IC40	03							
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
PLAY	2.2	4.0	0	3.8	2.2	1.2	0	0	0	0	0.2	0	0	4.2		
REC	2.2	4.0	0	3.8	2.2	1.2	0	0	0	0	0	0	0	4.2		

AUDIO 1 TRANSISTORS DC VOLTAGE CHART

REF NO.		Q4001			Q4007			Q4009			Q4010		T	Q4011	
	Ε	С	В	E	С	В	E	С	В	E	С	В	E	С	В
PLAY	5.0	11.9	5.6	2.4	7.7	3.0	11.9	11.6	11.1	11.9	11.6	11.1	11.9	0.1	11.9
REC	5.0	11.9	5.6	2.4	7.7	3.0	11.9	11.6	11.1	11.9	11.6	11.1	11.6	0	10.9
REF NO.		Q4013			Q4014			Q4015			Q4016			Q4017	
	Ε	С	В	E	С	В	E	С	В	E	С	В	Ε	С	В
PLAY	11.9	0	11.9	11.9	0	11.9	0	0	0.6	0	0	0.7	0	0	0.6
REC	11.9	11.8	11.2	11.9	11.8	11.2	0	0	0.6	0	0	0.7	0	0	0.6
REF NO.		Q4018			Q4019			Q4020			Q4021			Q4022	
	Е	С	В	E	С	В	E	С	В	E	С	В	E	С	В
PLAY	0	0	0.7	0	0	0	0	0	0	0	0	0 ·	0	0	0
REC	0	0	0.7	0	0	0.7	0	0	0.7	0	0	0.6	0	0	0.6
REF NO.		QR4001			QR4002			QR4003			QR4004			QR4005	
	E	С	В	E	С	В	E	С	В	E	С	В	Ε	С	В
PLAY	5.0	0	4.9	5.0	0	4.9	0	0	4.8	5.0	0	4.9	0	0	4.8
REC	5.0	5.0	0	5.0	5.0	0	0	4.7	0	5.0	5.0	0	0	4.7	0
REFNO.		QR4006			QR4015			QR4016			QR4017			QR4018	
	E	С	В	E	С	В	Ε	С	В	E	С	В	E	С	В
PLAY	5.0	0	4.9	0	0	0	2.2	2.2	0.1	0	0.1	0	0	0	0
REC	5.0	5.0	0	0	0	4.9	2.2	2.2	0	0	0	0	0	0	5.0
REFNO.		QR4019			QR4020			QR4021			QR4024			QR4025	
	Ε	С	В	E	С	В	E	С	В	Е	С	В	E	С	В
PLAY	2.2	0	0.1	0	0.1	0	0	0	0	0	0	0	0	11.9	0
REC	2.2	2.2	0	0	0	0	0	0	0	0	0	0	0	0	4.5
REFNO.		QR4026			QR4027			QR4028			2R4029			2R4030	
	E	С	В	Ε	С	В	E	С	В	E	С	В	E	С	В
PLAY	0	11.9	0	0	11.9	0	11.9	0	11.8	11.9	11.8	0	0	0	5.0
REC	0	0	4.5	0	0	4.5	11.9	0	11.8	11.9	11.8	0	0	0	5.0
REFNO.	(QR4031			QR4032										
	Ε	С	В	E	С	В									
PLAY	0	4.0	0	0	0	5.0									
REC	0	4.0	0	0	0	5.0									

VIDE-V01109 / DRUCK 37

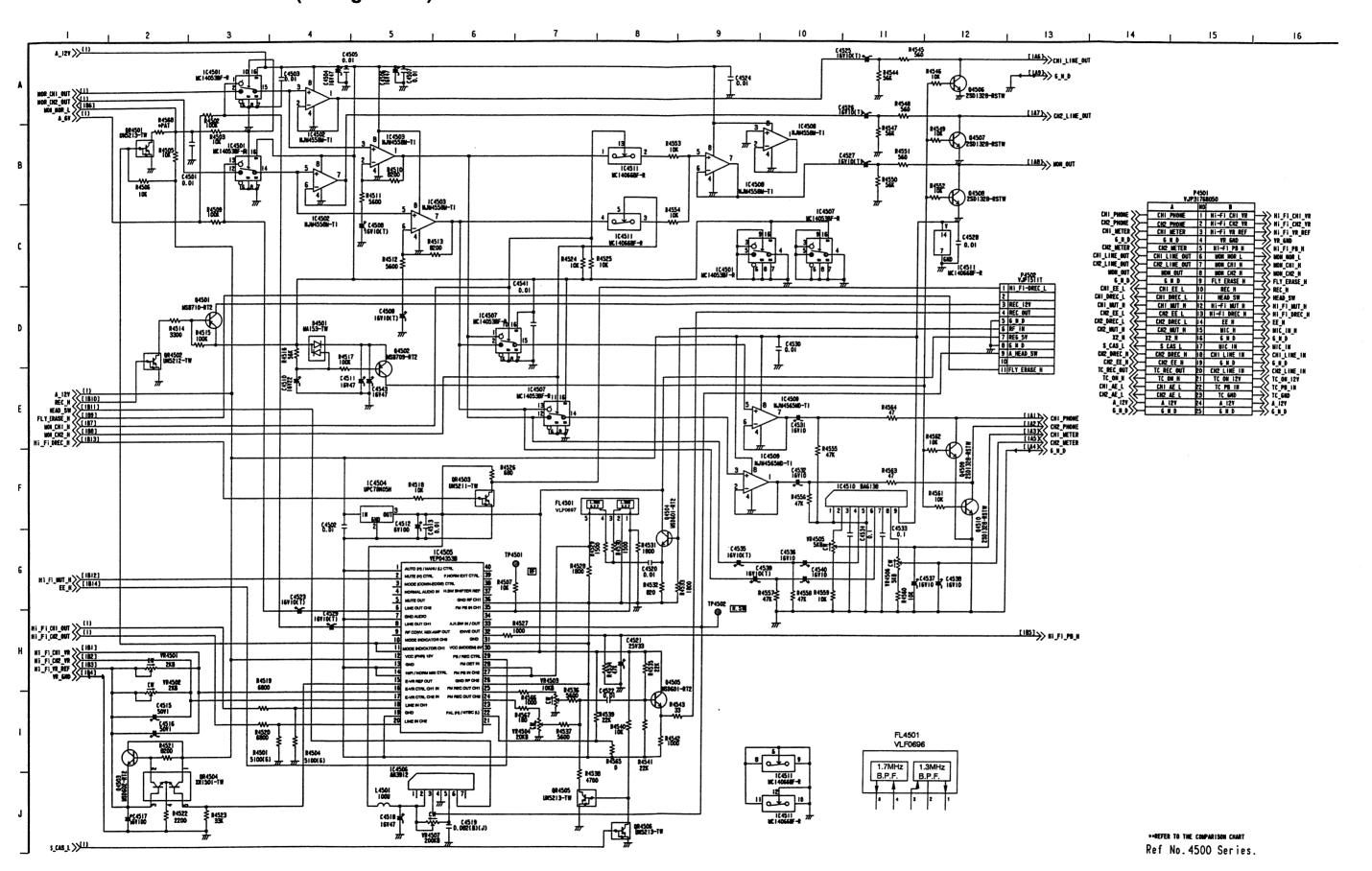
FM AUDIO PACK SCHEMATIC DIAGRAM (E8-1: Page CBA-10) IC4505 (VEP04353B)



FM AUDIO PACK SCHEMATIC DIAGRAM (E8-1: Page CBA-10) IC4505 (VEP04353B)

В 9 5 6 7 10 11 А C451 50V3R3(VA) C432 100P(J)(NP0) C450 SOV3R3(VA) C438 1000P В AUTO(H)/MANU(L)CTRL IC401 F.NORM EXT CTRL MUTECHICTRL BA7705K1 HODE (DOWN-EDGE) CTRL DET - WEIGHT H.SW SHIFTER REF 20K LPF R434 C452 D401 330 S0V3R3(VA) MA720-TW R435 1000 C454 15V10(VA) -[ATT] LINE OUT CH2 FM PB IN CH1 R437 330 R438 1000 C456 50V1(VA) CNO AUDIO NOISE DET 8PF A.H.SW IN/OUT LINE OUT CHI \$%\$4 \$%\$4 HODE INDICATOR CH2 CNO OUTPUT SW CONTROL C425 R414 D.1(WV) 1M VCCCHOOLHOSV HODE INDICATOR CH1 FM DET R442 1800 PB/REC CTRL PB/REC CONTROL VCC (PNR) 12V D.D. DET ENVE R443 1800 FH DET IN C457 16Y22(YA) FM PB IN CH2 HIFI/NORM HIX CTRL HSL ATT GND RF CH2 C459 6V47(VA) FM REC DUT CHI E-VR CTRL CH1 IN AUD10 20K LPF HOLD1 C460 6V47(VA) FM REC OUT CH2 E-VR CTRL CH2 IN DET - WEIGHT - RLF LINE IN CHI Ε PAL(H)/NTSC(L) LINE IN CH2 C417
C417
C5Y4R7(VA) C401 16V4R7(VA)(N) C414 1000P C408 25V10(VA)
C410 C400 R
25V4R7(VA) 0.022 R
C411 C411 R
15V47(VA) R40E 3300 C402 16Y4R7(YA)(N) G

AUDIO 2 SCHEMATIC DIAGRAM (E8: Page CBA-6)



AUE

AUD

PLA REC REFI

PINN

PLA REC REF!

PINN

PLA

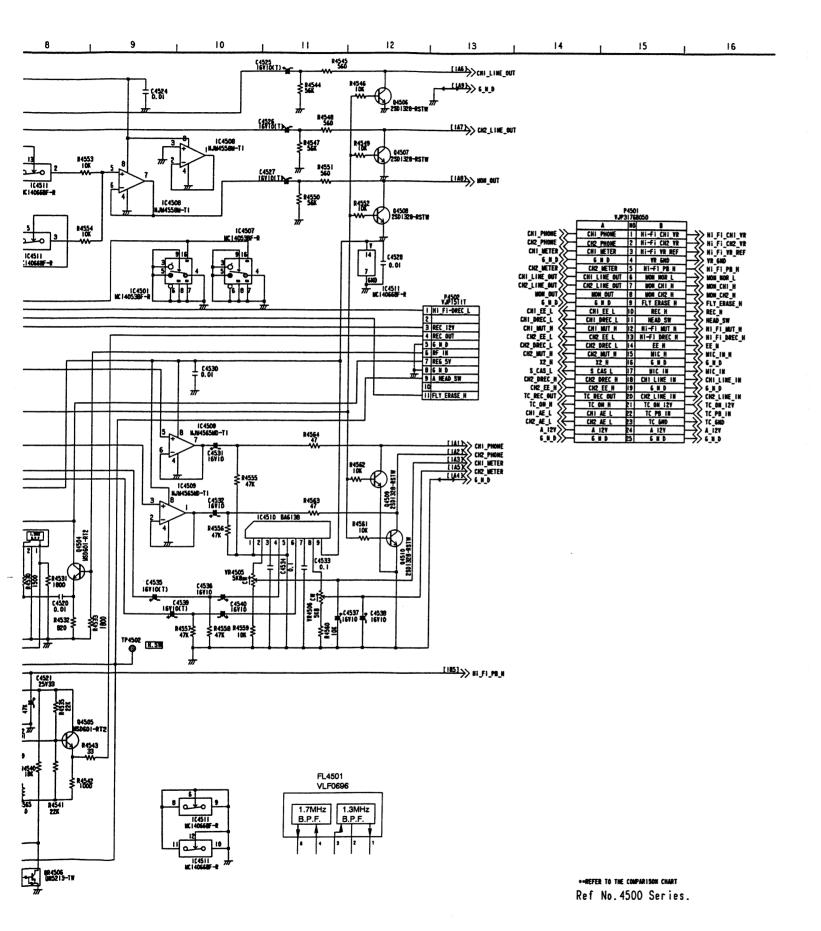
PLA REC REF1

PLA REC REF1

PLA REC REF1

PLA

SCM-24



VIDE-V01109 / DRUCK 40

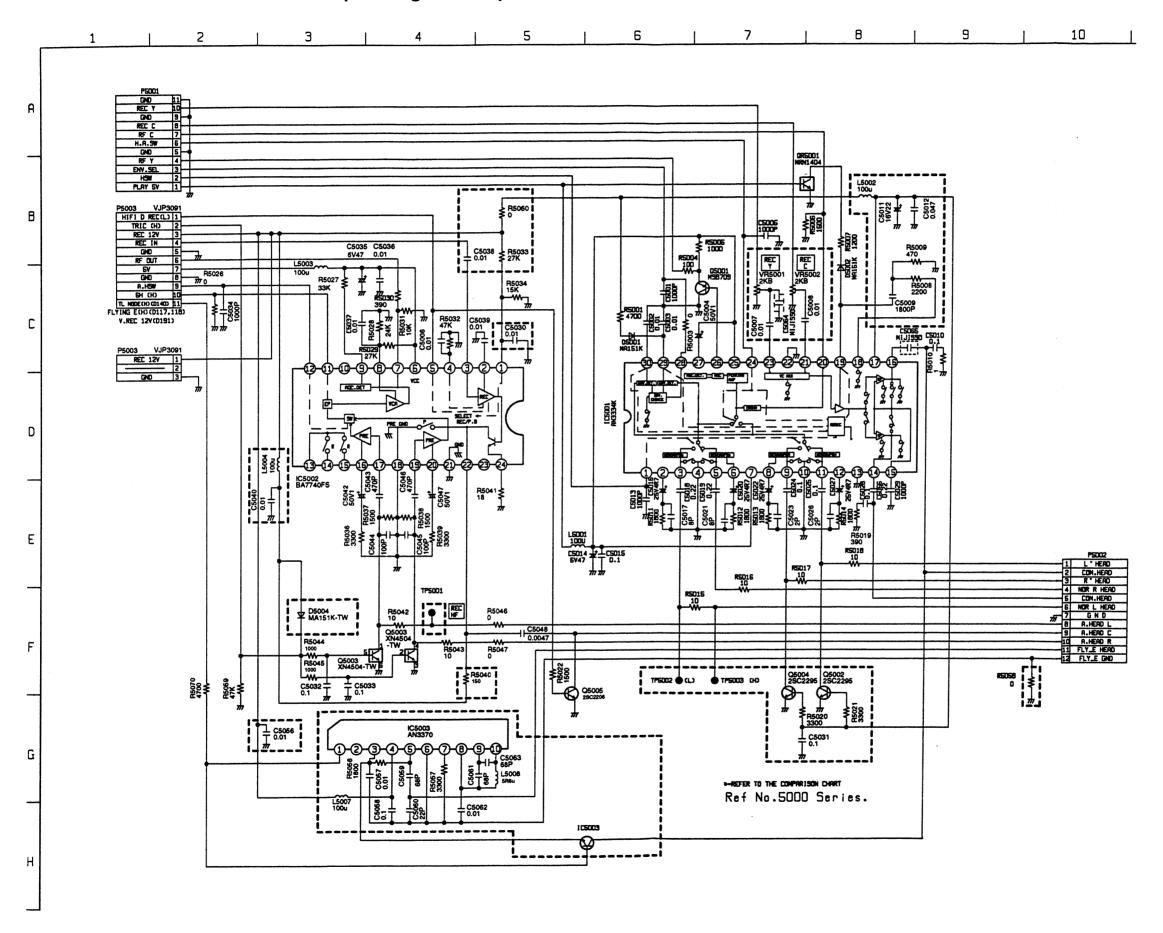
AUDIO 2 ICs DC VOLTAGE

AUDIU	210	SDC	VOL	IAGE						•						
REF NO.								IC4	501							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	5.8	5.9	0	0	0	0	0	0	0	0	0	5.9	5.9	5.9	5.9	11.9
REC	5.8	5.9	0	0	0	0	0	0	0	0	0	5.9	5.9	5.9	5.9	11.9
REF NO.								IC4	502			***************************************			<u> </u>	
PIN NO.	1	2	3	4	5	6	7	8	1						T	T
PLAY	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9	T							
REC	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9		1					1	1
REF NO.				IC4	503					IC4504			***************************************		*	
PIN NO.	1	2	3	4	5	6	7	8	1	2	3					
PLAY	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9	11.9	0	4.9					1
REC	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9	11.9	0	4.9					
REF NO.								IC4	505				*			
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	0	5.3	5.3	1.2	0	0	0	0	1.7	1.7	11.9	0	0	4.8	4.8
REC	0	0	5.3	0	0.2	0	0	0	0	1.7	1.7	11.9	0	0	4.8	4.4
REF NO.								IC4	505							
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	4.5	1.8	0	1.8	0	0	0	0	0	0	0	0	0	4.9	0	3.5
REC	4.5	1.8	0	1.8	0	0	0	0	0	0	0	0	4.7	4.9	0	0
REF NO.								IC4	505						····	
PIN NO.	33	34	35	36	37	38	39	40								
PLAY	0	0	0	0	4.9	0	0	0								
REC	4.9	0	0	0	4.9	0	0	0								
REF NO.								IC4	506							
PIN NO.	1	2	3	4	5	6	7									
PLAY	0	4.9	4.9	0	0.7	4.8	0									
REC	0	4.9	4.9	0	0.7	4.8	0									
REF NO.								IC45	507							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	5.9	5.9	0	0	0	0	0	0	0	11.9	11.9	5.9	5.9	5.9	5.9	11.9
REC	5.9	5.9	0	0	0	0	0	0	0	11.9	11.9	5.9	5.9	5.9	5.9	11.9
REF NO.	<u> </u>							IC45	808							
PIN NO.	1	2	3	4	5	6	7	8								
PLAY	11.4	11.4	0	0	5.9	5.9	5.9	11.9								
REC	11.4	11.4	0	0	5.9	5.9	5.9	11.9								
REF NO.								IC45	09							
PIN NO.	1	2	3	4	5	6	7	8								
PLAY	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9								
REC	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9								
REF NO.				,				IC45								
PIN NO.	1	2	3	4	5	6	7	8	9							
PLAY	0	1.6	2.2	1.9	0	1.9	2.3	1.7	11.9		T					
REC	0	0	0.6	1.9	0	1.9	0.6	0	11.9					T		

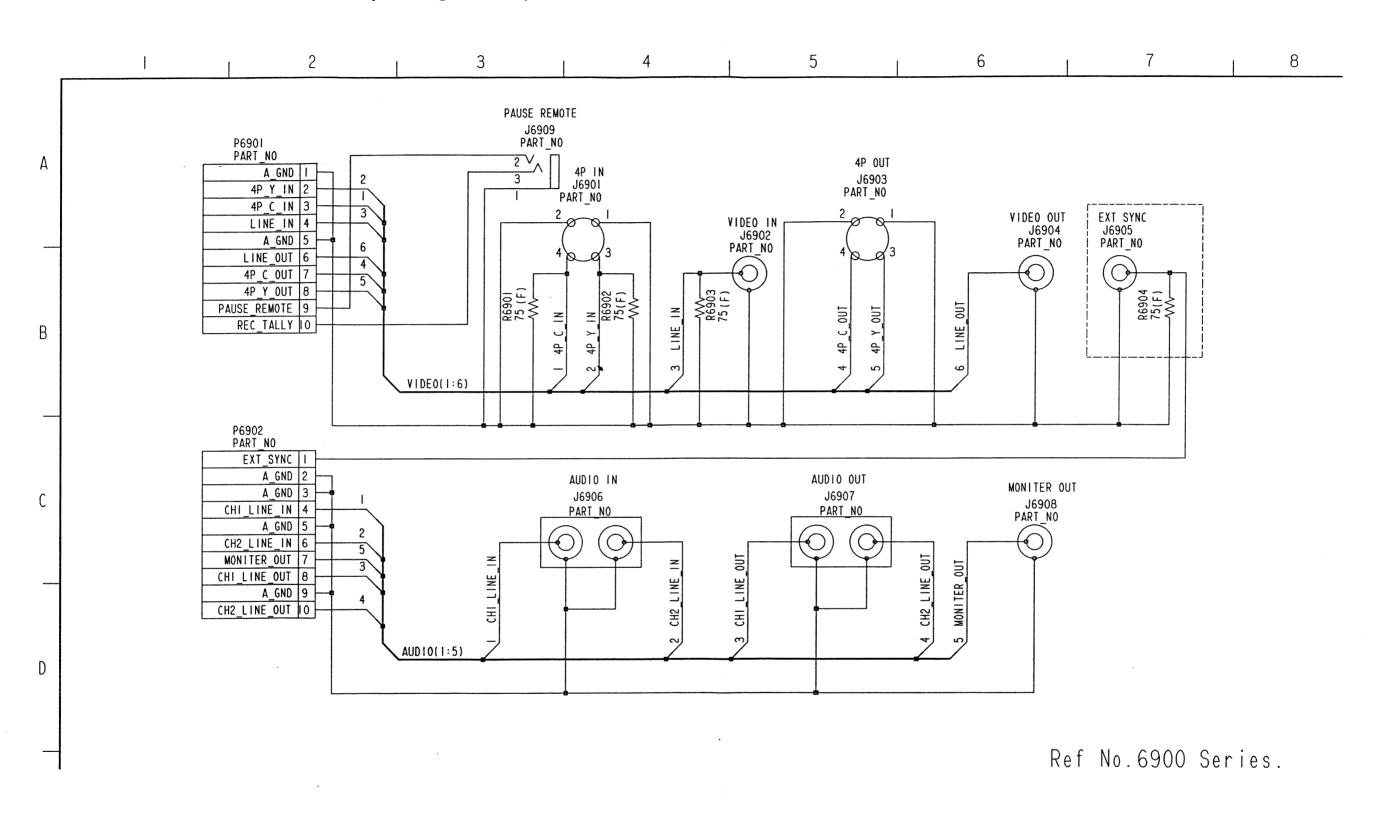
AUDIO 2 TRANSISTORS DC VOLTAGE

REF NO.		Q4501			Q4502			Q4503			Q4504			Q4505		
	Ε	С	В	E	С	В	E	С	В	E	С	В	E	С	В	
PLAY	11.9	0	11.8	11.5	0.2	11.7	4.8	11.9	5.4	1.3	4.9	1.9	1.8	4.9	2.4	
REC	11.9	11.7	11.1	11.3	0	11.7	4.8	11.9	5.4	2.4	4.9	3.0	1.8	4.9	2.4	
REF NO.		Q4507			Q4508		Q4509		Q4510							
	E	С	В	E	С	В	E	С	В	E	С	В				
PLAY	0	. 0	0.3	0	0	0.3	0	0	0.2	0	0	0.2				
REC	0	0	0	0	0	0	0	0	0	0	0	0				
REF NO.	(QR4502			QR4503	}			QR4504							
	E	С	В	Ε	С	В	1	2	3	4	5					
PLAY	0	11.8	0	0	3.6	0	11.9	5.4	4.8	4.2	4.8					
REC	0	0	4.8	0	3.6	0	11.9	5.4	4.8	4.2	4.8					
REF NO.		QR4505			QR4506							•				
	Ε	С	В	Е	С	В										
PLAY	0	0	0	0	0	5.0										
REC	0	0	0	0	0	5.0				-						

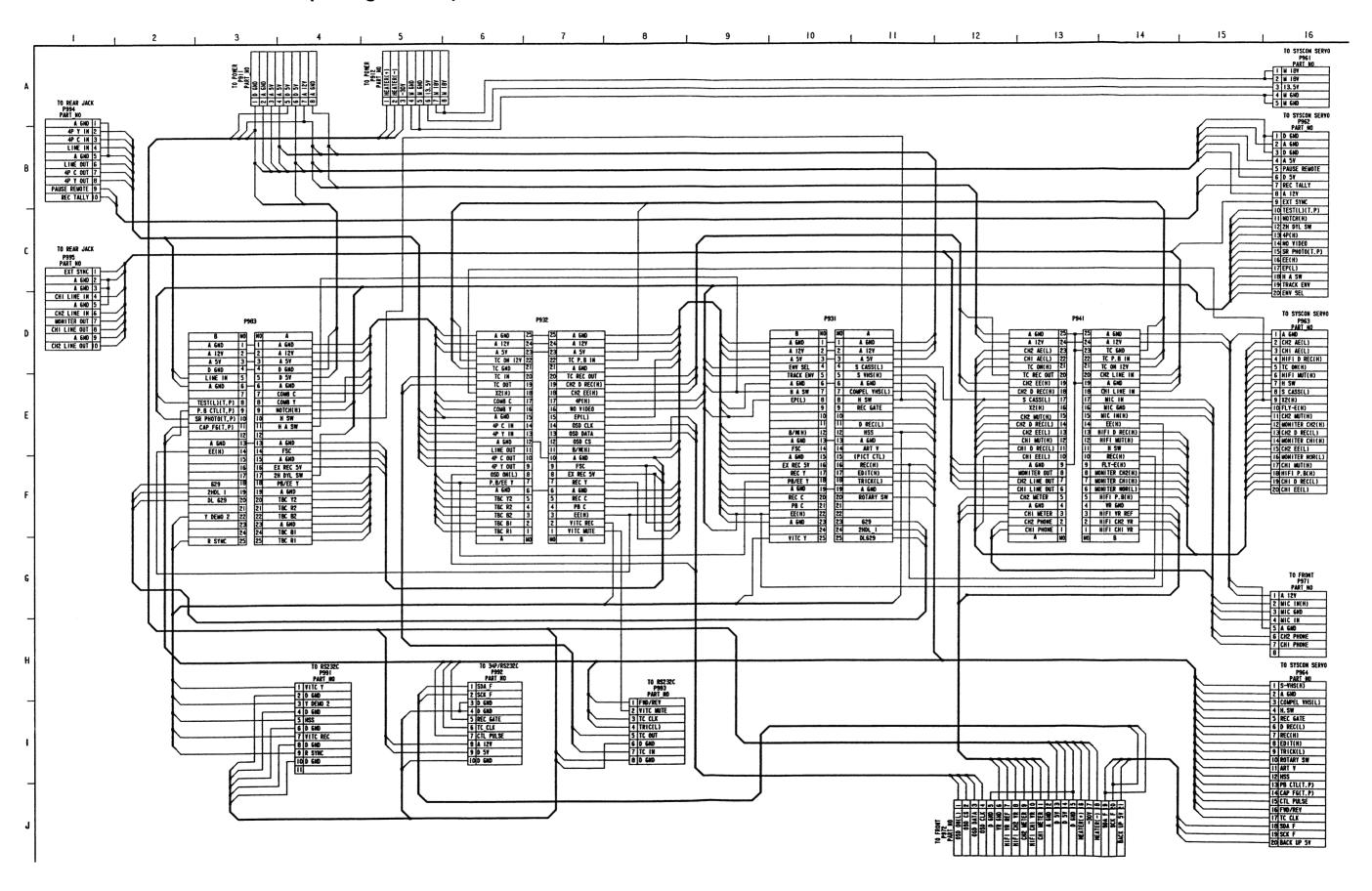
HEAD AMP SCHEMATIC DIAGRAM (E12: Page CBA-10)



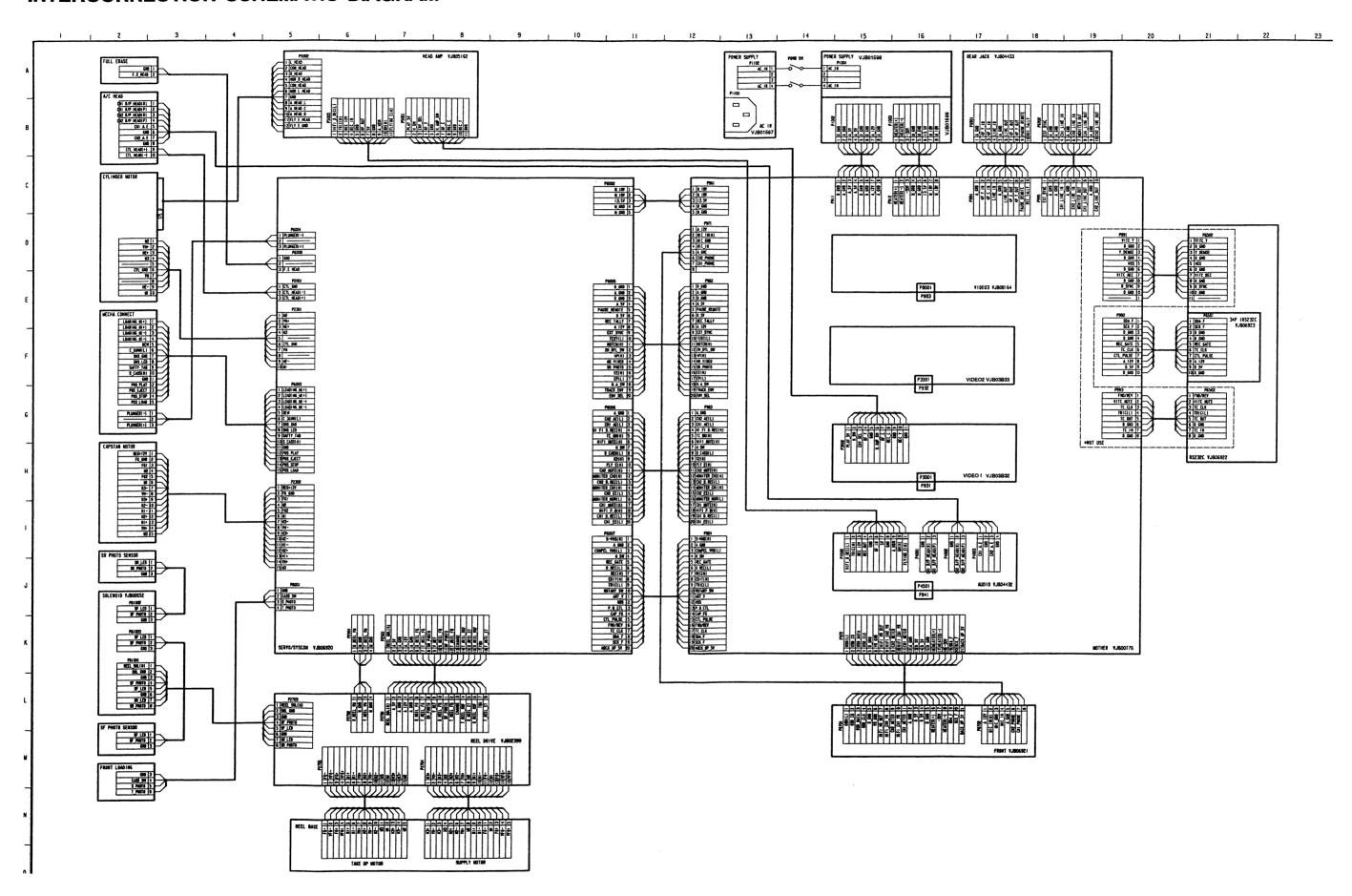
REAR JACK SCHEMATIC DIAGRAM (E13: Page CBA-12)



MOTHER SCHEMATIC DIAGRAM (E9: Page CBA-11)



INTERCONNECTION SCHEMATIC DIAGRAM



SECTION 7

CIRCUIT BOARDS

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VIDEO (2) C.B.ACBA	۸-8
VIDEO (3) C.B.ACBA	A-9
FM AUDIO PACK C.B.A.·····CBA	
HEAD AMP C.B.A. ·····CBA	4-10
MOTHER C.B.A. ·····CBA	4-11
REAR JACK C.B.A. ·····CBA	A-12

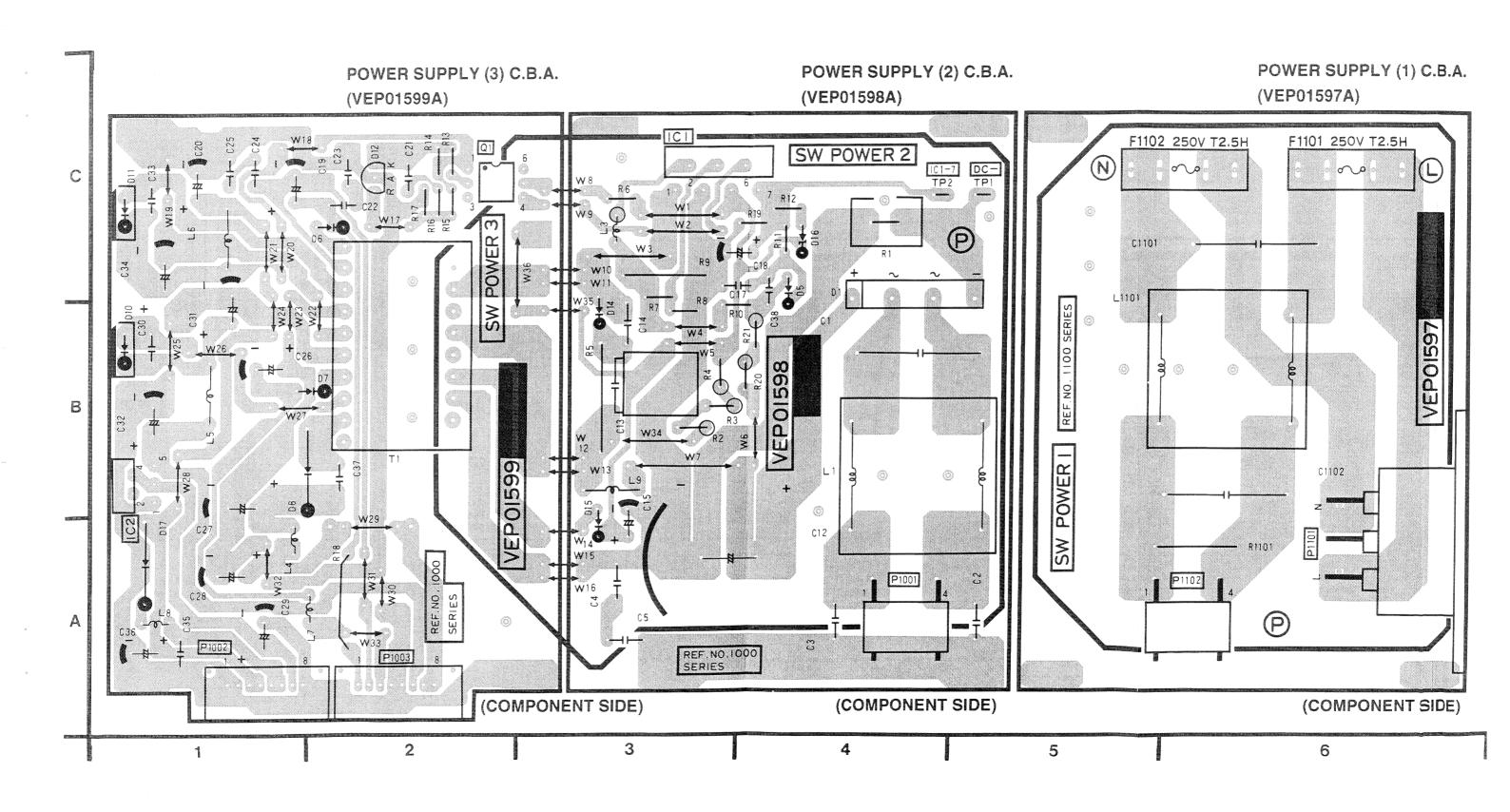
IMPORTANT SAFETY NOTICE

COMPONENTS IDENTIFIED WITH THE MARK A HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

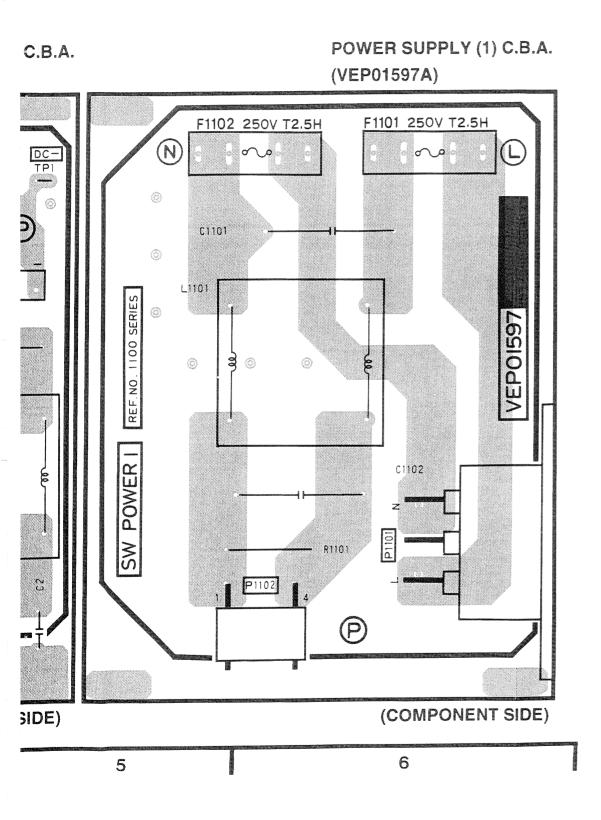
NOTE

DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

POWER SUPPLY (1) C.B.A. (VEP01597A) / POWER SUPPLY (2) C.B.A. (VEP01598A) / POWER SUPPLY (3) C.B.A. (VEP01599A)

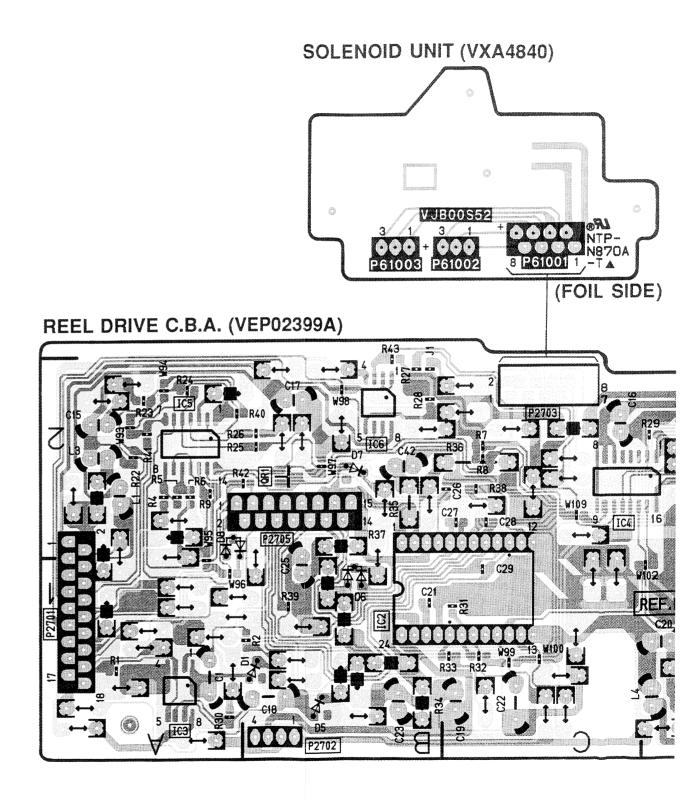


REEL DRIVE C.B.A. (VEP02399A)

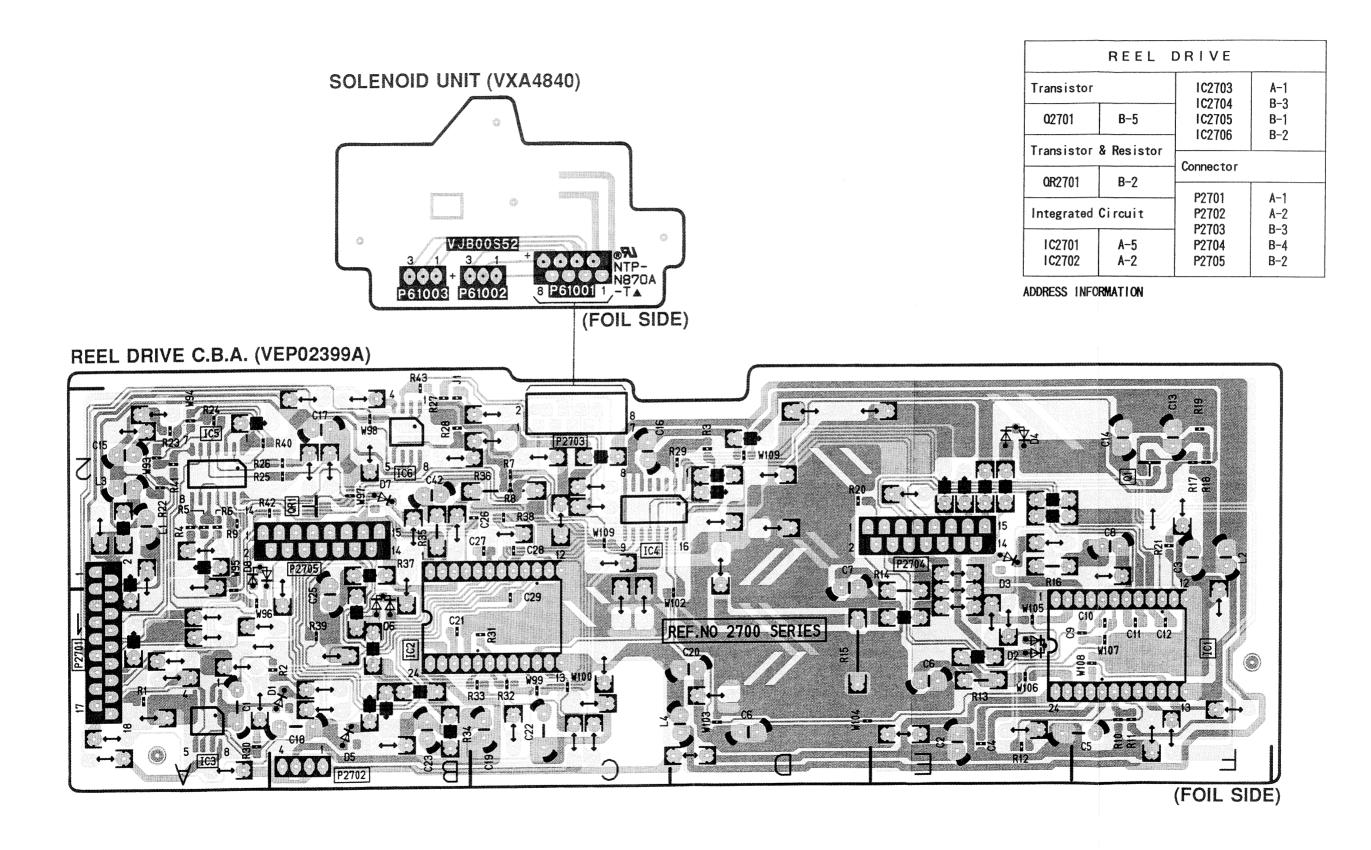


POWER						
Transistor						
Q1001	C-2					
Integrated	Circuit					
IC1001 IC1002	C-3 B-1					
Test Point						
TP1001 TP1002	C-5 C-4					
Connector						
P1001 P1002 P1003 P1101 P1102	A-4 A-1 A-2 A-6 A-5					

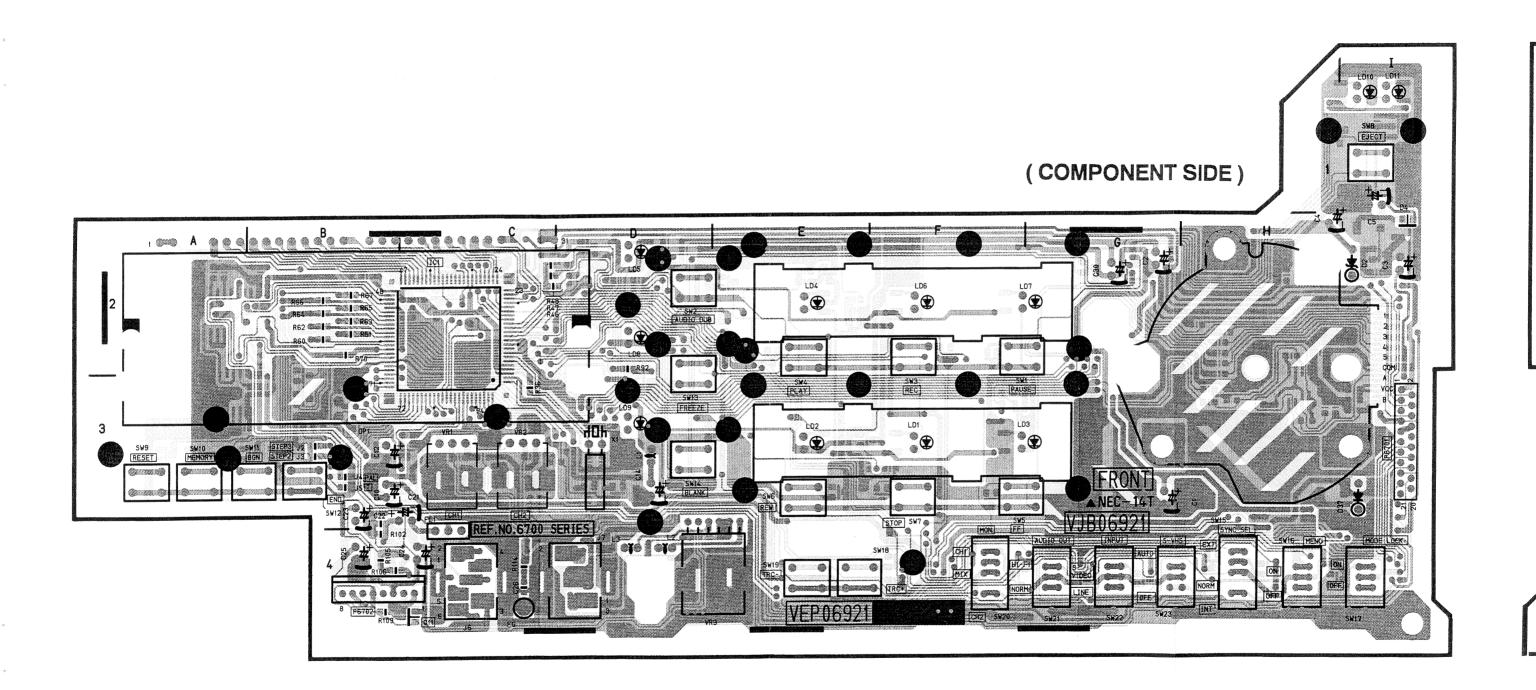
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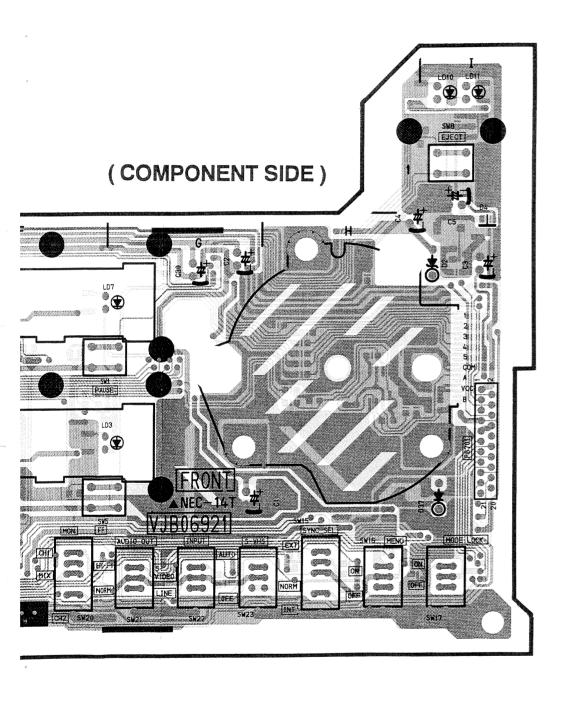


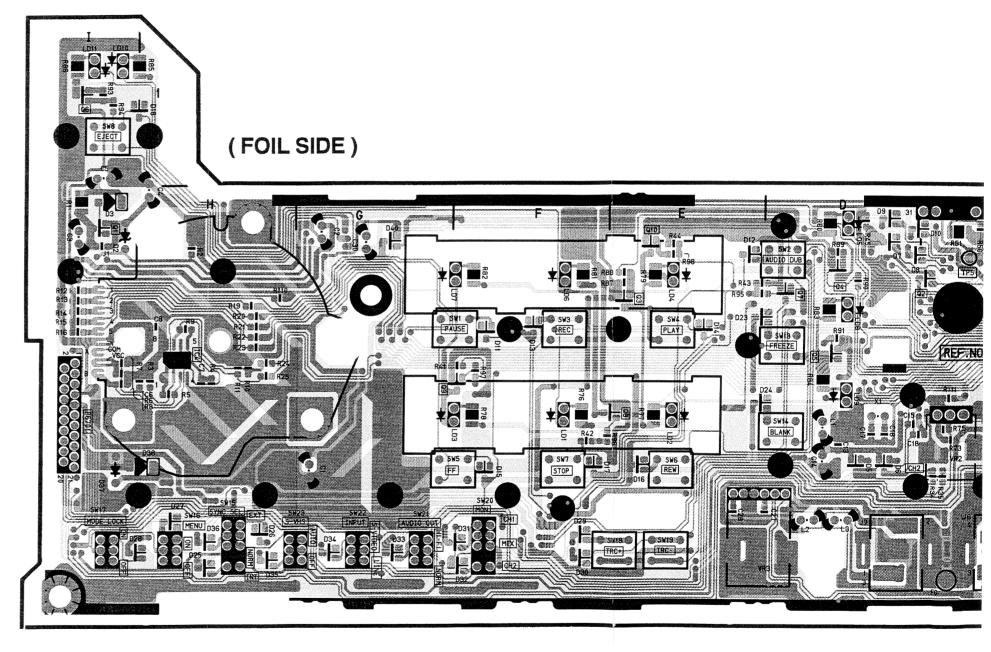
REEL DRIVE C.B.A. (VEP02399A)



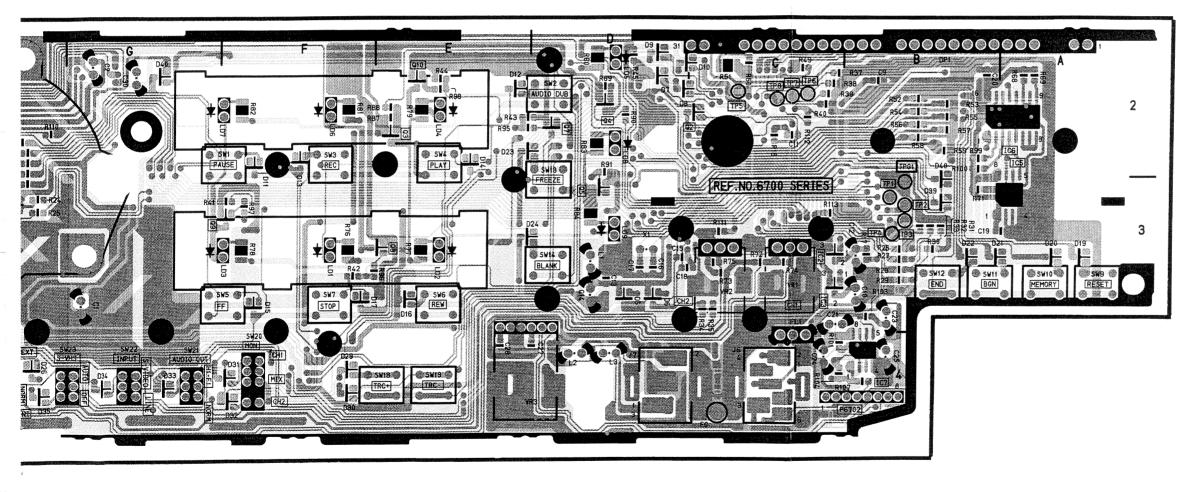
FRONT (1~4) C.B.A. (VEP06921B)







OIL SIDE)



FOIL SIDE

COMPONENT SIDE

Transistor

06711

IC6701

Adjustment

VR6701 VR6702

FRONT

Integrated Circuit

C-3

C-2

C-3

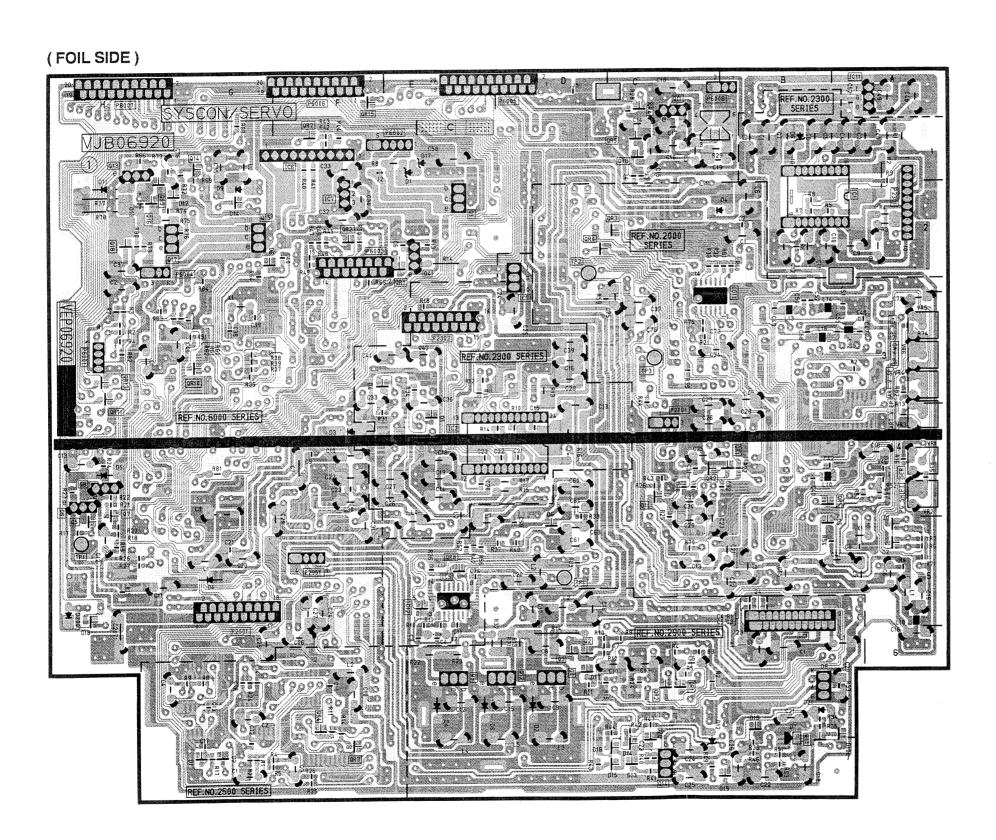
C-3

FOIL SIDE								
FR	FRONT							
Transistor								
06701 06702 06703 06704 06705 06706 06707 06708 06709 06710	I-2 C-2 E-2 D-2 D-3 I-1 D-2 E-3 G-3 E-2							
Integrated	Circuit							
1C6702 1C6703 1C6704 1C6705 1C6706 1C6707	C-3 C-3 H-3 A-2 A-2 B-4							
Test Point	1							
TP6701 TP6702 TP6703 TP6704 TP6705 TP6706 TP6707 TP6708 TPG6701	B-3 B-3 B-3 B-3 C-2 C-2 C-2 C-2 B-3							
Adjustment								
VR6701 VR6702 VR6703	C-3 C-3 E-4							

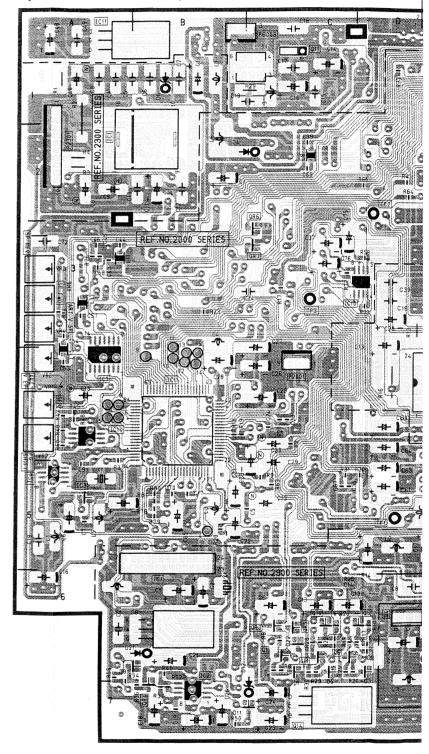
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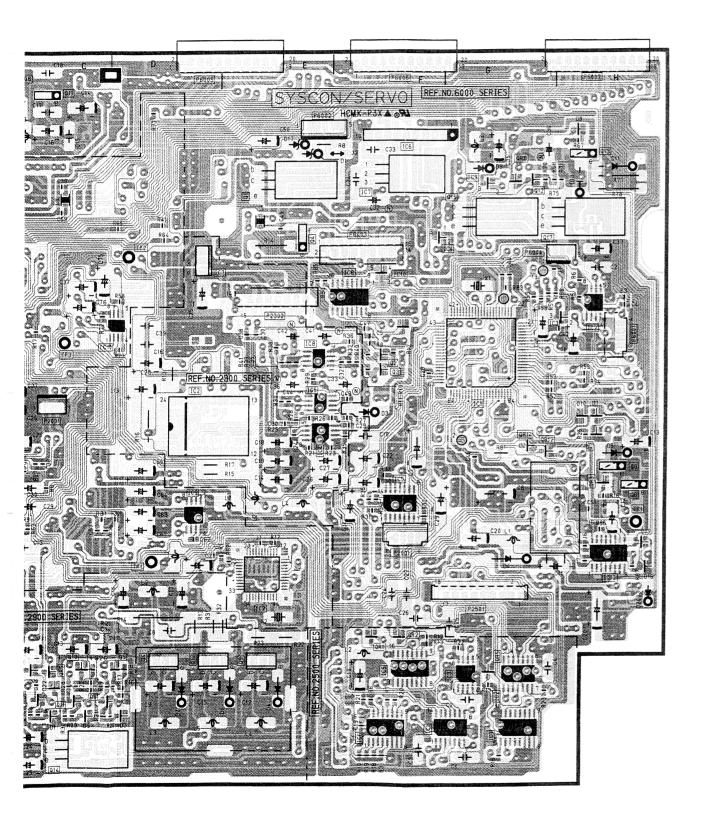
 VR6703	E-4			
Connector				
P6701 P6702	I-3 B-4			
ADDRESS INFO	RMATION			

SYSTEM CONTROL & SERVO C.B.A. (VEP06920B)



(COMPONENT SIDE)





COMPONENT SIDE

COHI CHILITI 3	IDL		
SYSTE	M CONT	ROL &	SERVO
Transistor		1C2308	E-3
	T	IC2501	G-7
02901	C-6	IC2502	G-6
02904	D-6	IC2503	G-6
1	D-6	1C2505	F-6
02905	1	1	1
02906	C-6	1C2506	F-6
02909	E-6	1C2507	G-7
02910	C-6	IC2901	B-5
02911	C-6	IC2902	B-7
02912	D-6	IC6001	A-2
02914	C-7	IC6001	G-3
06001	E-2	IC6002	H-3
06002	F-3	1C6003	H-3
1	1	1	1
06003	F-3	1C6005	F-4
Q6004	E-2	1C6006	F-1
Q6006	H-4	IC6007	F-2
Q6008	H-4	1C6008	F-3
Q6009	H-4	IC6009	G-2
Q6011	C-1	IC6010	F-3
06012	G-2	IC6011	A-1
Q6013	H-1	IC6012	H-5
Q6015	G-2	100012	11.5
	1	T D	
Q 6017	H-2	Test Point	
Transistor	& Resistor	TP2001	D-5
	·	TP2002	D-2
QR2006	C-2	TP2003	C-3
QR2007	C-3	11 2003	0 0
QR2501	F-6	Adjustment	
	-	Aujustillerit	
QR2502	F-6	UDOOOA	
QR2505	G-6	VR2001	A-4
QR2903	C-6	VR2002	A-4
QR2904	B-7	VR2003	A-4
QR2905	C-6	VR2004	A-3
QR6003	H-3	VR2005	A-3
QR6008	G-2	VR2006	A-3
QR6012	G-4		
QR6014	G-4	Connector	
Integrated	Circuit	P2001	C-4
		P2301	A-2
IC2001	A-4	P2302	E-3
IC2001	B-4	P2501	G-5
IC2002	E-5	P2901	F-5
IC2002	A-5	1	H-3
	_	P6001	
IC2004	A-5	P6002	E-1
IC2009	D-4	P6003	F-2
IC2014	A-4	P6004	H-2
IC2302	D-4	P6005	D-1
IC2304	E-4	P6006	F-1
IC2305	E-4	P6007	H-1
IC2307	D-2	P6008	B-1
			-

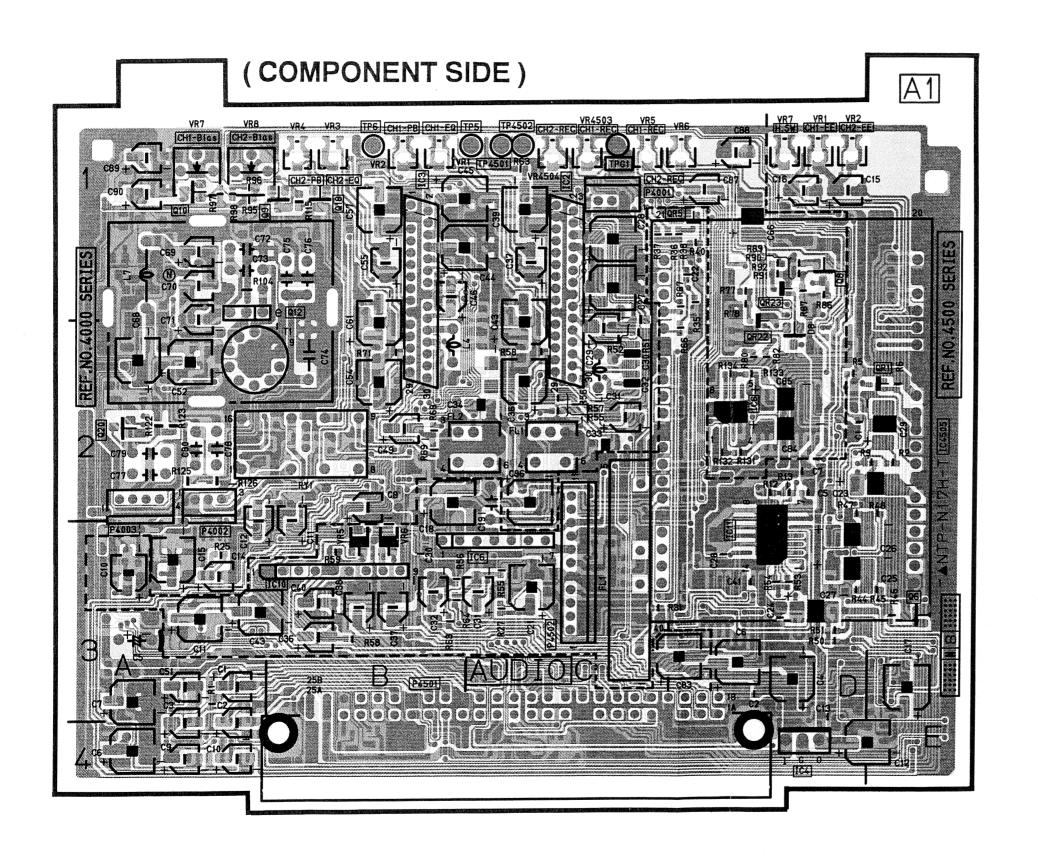
FOIL SIDE

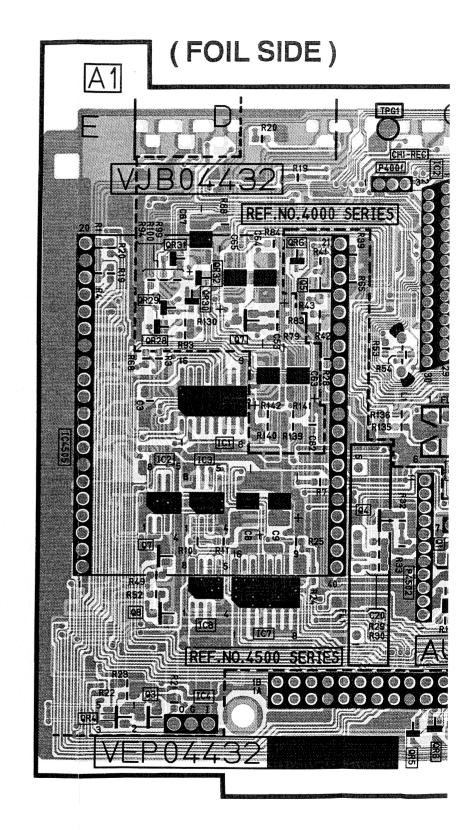
	M CONT	T	SERVO
Transistor		Integrated	Circuit
02001	C-4	IC2005	E-5
02902	E-6	IC2011	C-3
02903	E-6	IC2012	E-5
02904	E-6	IC2301	B-2
02909	E-6	IC2302	E-4
02912	E-6	IC2307	D-2
02913	B-6	IC2901	B-5
02914	C-7	IC6001	A-1
06001	E-2	IC6006	F-1
06004	E-2	1C6007	F-2
06005	H-4	100001	1 2
Q6006	H-4	Test Point	
Q6007	H-4	1621 101111	
06008	H-4	TP2001	D-5
Q6011	C-1	TP2001	1
06013	H-1	1	D-2 C-3
		TP2003	1
06014	G-1	TP6001	H-5
06015	G-2	A.J.:	A
Q6016	H-2	Adjustment	
06017	G-2	VDCCC4	
06018	H-2	VR2001	A-4
		VR2002	A-4
Transistor	& Kesistor	VR2003	A-4
000001		VR2004	A-3
QR2001	B-4	VR2005	A-3
QR2002	C-4	VR2006	A-3
QR2003	C-2		
QR2004	D-2	Connector	
QR2005	A-4		
QR2008	E-5	P2001	C-4
QR2503	F-7	P2301	A-2
QR2504	F-6	P2302	E-3
QR2901	C-6	P2501	G-5
QR2902	C-6	P2901	F-5
QR6001	E-2	P6001	H-3
QR6002	F-2	P6002	E-1
QR6004	C-1	P6003	F-2
QR6005	C-1	P6004	H-2
QR6006	C-1	P6005	E-1
QR6007	F-1	P6006	F-1
QR6009	H-2	P6007	H-1
QR6010	G-3	P6008	C-1
	H-3	. 0000	V 1
QR6011			
QR6011 QR6013	H-3	The state of the s	

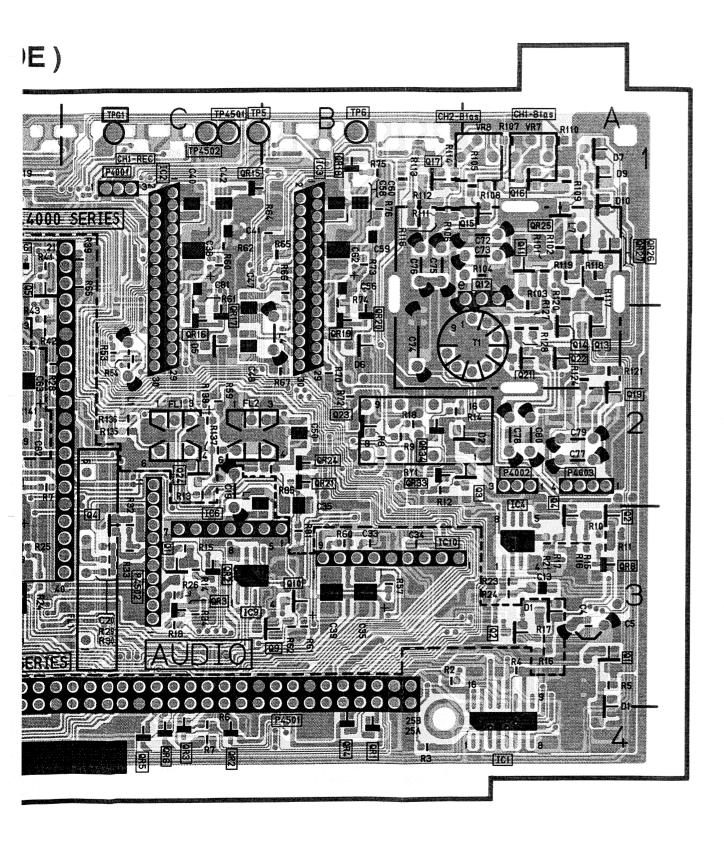
ADDRESS INFORMATION

ADDRESS INFORMATION

AUDIO C.B.A. (VEP04432B)







FOIL SIDE

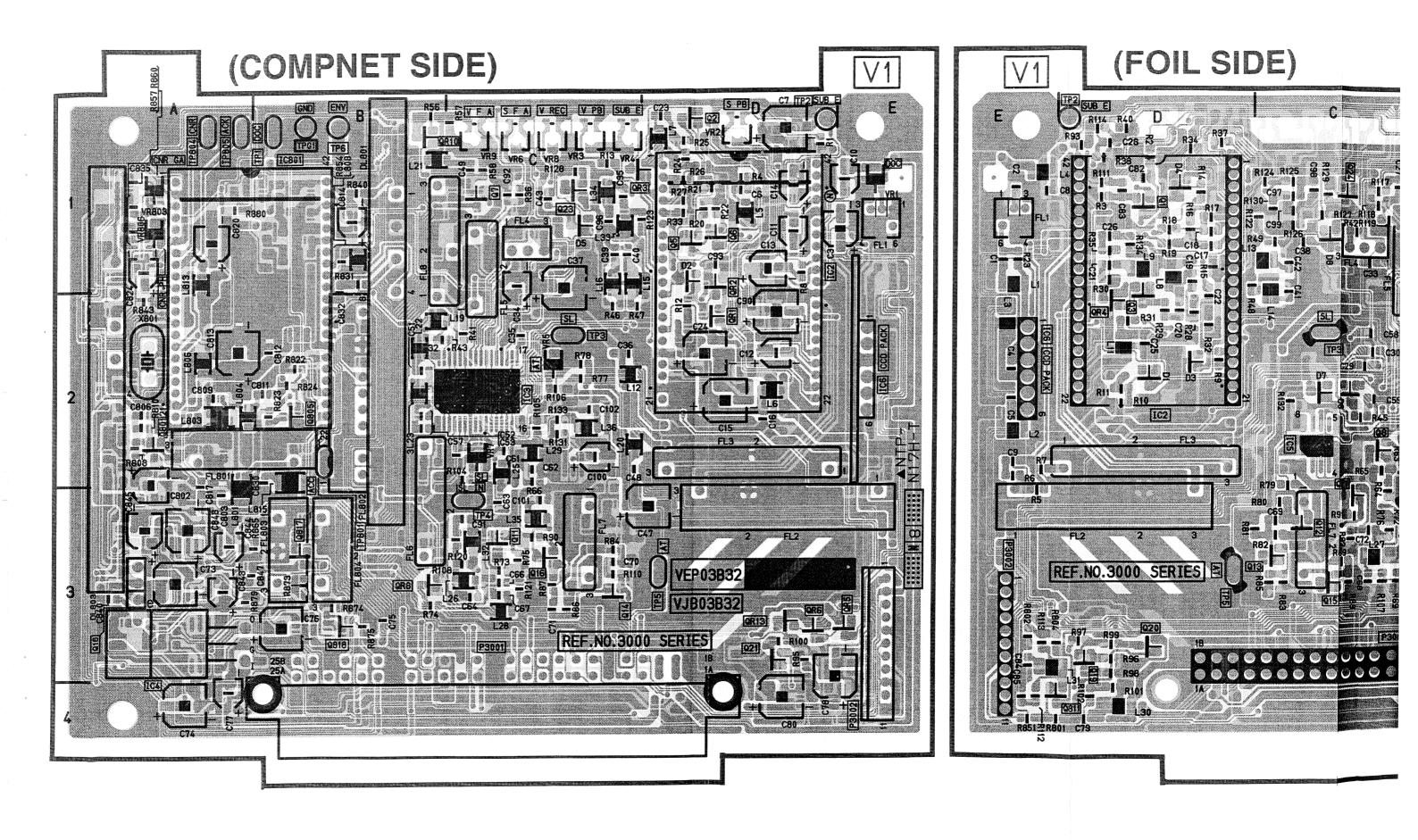
FUIL SIDE					
-,		AUD	10 1		
Transistor		QR4019	B-2	Test Point	
	T	OR4020	B-2		I
Q4001	A-3	QR4021	B-2	TP4005	C-1
Q4002	A-3	OR4024	B-2	TP4006	B-1
Q4003	A-2	OR4025	A-1	TP4501	C-1
Q4004	A-3	QR4026	A-1	TP4502	C-1
Q4007	D-2	OR4027	A-1	TPG4001	C-1
Q4011	A-1	QR4028	D-2		
Q4012	A-1	OR4029	D-2	Connector	
Q4013	A-2	QR4030	D-2		
Q4014	A-2	OR4031	D-1	P4001	C-1
Q4015	A-1	QR4032	D-1	P4002	A-2
Q4016	A-1	QR4033	B-2	P4003	A-2
Q4017	B-1	QR4034	B-2	P4501	C-3
Q4019	A-2	QR4502	C-3	P4502	C-3
Q4021	A-2	QR4503	C-3		
Q4022	A-2	QR4504	E-1		
Q4023	B-2	QR4506	D-1		
Q4024	C-2	-			
Q4501	C-3	Integrated	Circuit	-	
Q4502	A-3	ļ	1		
Q4503	D-4	IC4001	A-1		
Q4504	C-3	IC4002	C-1		
Q4505	D-1	IC4003	B-1		
Q4507	D-3	IC4004	A-3		
Q4508	D-3	IC4501	D-2		
Q4509	B-3	IC4502	D-3		
Q4510	B-3	1C4503	D-3		
	<u> </u>	IC4504	D-4		
Transistor	& Resistor	1C4505	D-2		
	T	IC4506	C-3		
QR 4001	B-4	1C4507	D-3		
QR4002	C-4	IC4508	D-3		
QR4003	C-4	IC4509	C-3		
QR4004	B-4	IC4510	B-3		
QR4005	C-4		L	_	
QR4006	C-4	Adjustment			
QR4008	A-3		r		
QR4015	C-1	VR4007	A-1		
QR4016	C-2	VR4008	A-1		
QR4017	C-2				
QR4018	B-1				
010	•				

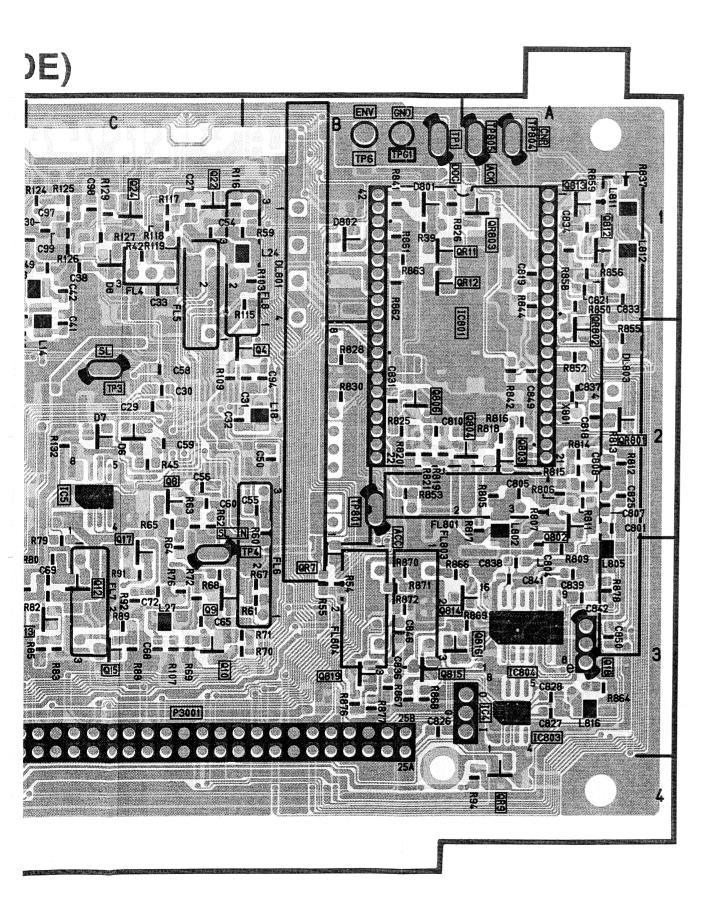
COMPONENT SIDE

	AUD	10 1				
Transistor		VR4004 VR4005	B-1 C-1			
04009	A-1	VR4006	D-1			
04010	A-1	VR4007	A-1			
04012	B-1	VR4008	A-1			
04018	B-1	VR4501	D-1			
04020	A-2	VR4502	D-1			
04506	E-3	VR4503	C-1			
Q4508	D-1	VR4504	C-1			
		VR4505	B-3			
Transistor	& Resistor	VR4506	B-3			
		VR4507	D-1			
QR4022	D-2	Test Point	Ĺ			
1	QR4023 D-1					
QR4501	E-2		T			
QR4505	D-1	TP4005	C-1			
Integrated	C:: 4	TP4006	B-1			
Integrated	CITCUIT	TP4501 TP4502	C-1 C-1			
IC4002	C-1	TPG4001	C-1			
IC4002	B-1	11 04001	C-1			
IC4006	D-2	Connector				
IC4504	D-4					
1C4506	C-3	P4001	C-1			
IC4510	B-3	P4002	A-2			
IC4511	D-3	P4003	A-3			
		P4501	C-3			
Adjustment		P4502	C-3			
VR4001	B-1					
VR4002	B-1					
VR4003	B-1					

ADDRESS INFORMATION

ADDRESS INFORMATION





COMPONENT SIDE

FOIL SIDE

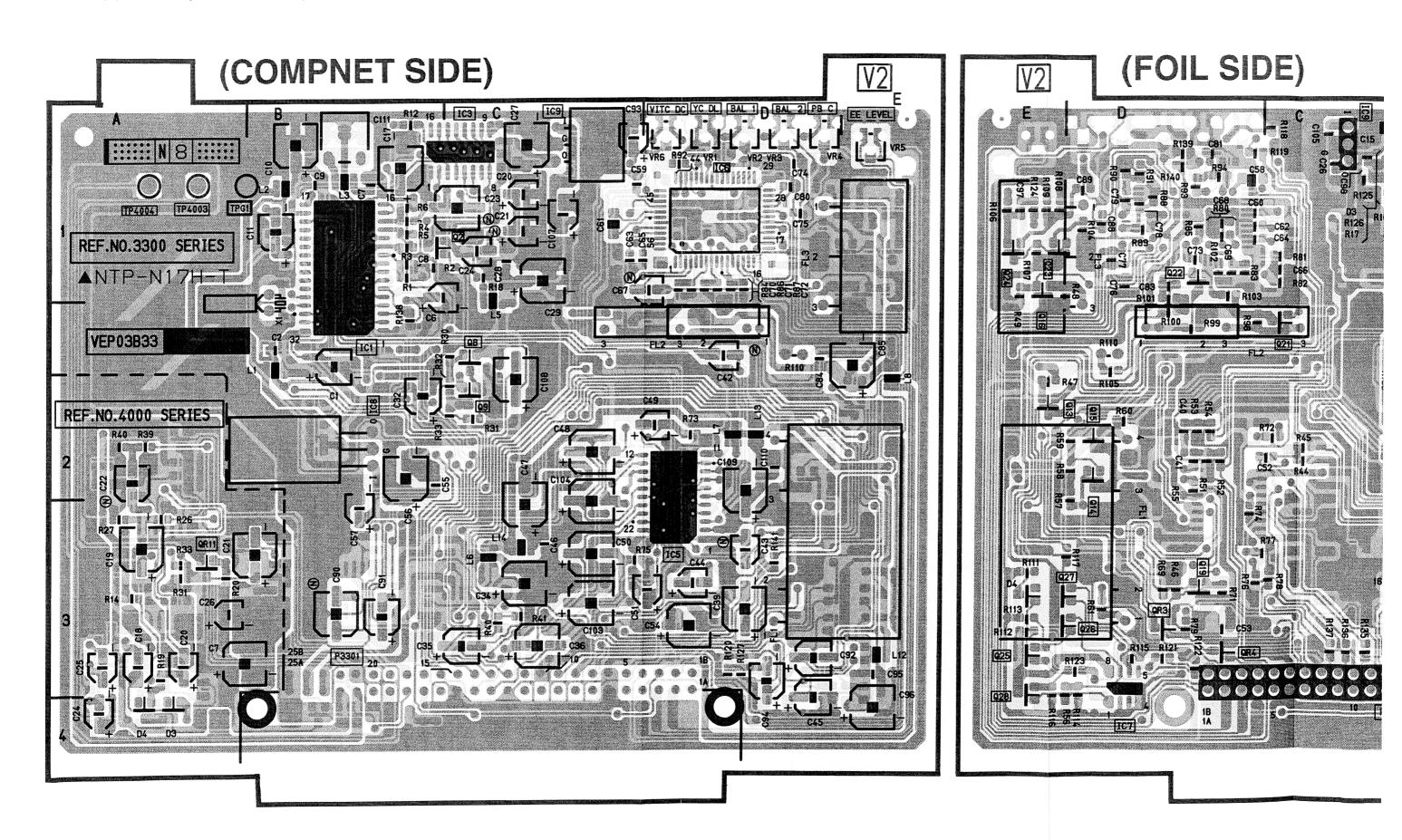
VIDEO 1							
Transistor		1C3006 1C3003	E-2 C-2				
03801 03018	A-2 A-3	Test Point					
03805	B-2	rest rome					
03817	B-3	TP3804	A-1				
03818	B-3	TP3805	A-1				
03008	B-3	TP3001	B-1				
03007	C-1	TPG3001	B-1				
03023	C-1	TP3006	B-1				
03011	C-3	TP3801	B-3				
03016	C-3	TP3004	C-3				
03014	C-3	TP3003	C-2				
03021	D-3	TP3005	D-3				
03005	D-1	TP3002	D-1				
03006 03002	D-1 D-1	Adjustment					
Tuama : . 4	0 D	-					
Transistor	& Resistor	VR3002	D-1				
QR3010	B-1	VR3003	C-1				
QR3003	C-1	VR3005 VR3007	C-2 C-2				
QR3002	D-1	VR3001	E-1				
QR3001	D-2	VR3009	C-1				
QR3013	D-3	VR3006	C-1				
QR3006	D-3	VR3008	C-1				
QR3005	E-3	VR3004	C-1				
Integrated	Circuit	Conector					
IC3004	A-4	P3002	E-4				
IC3801	B-1	P3001	E-3				
1C3002	D-1						

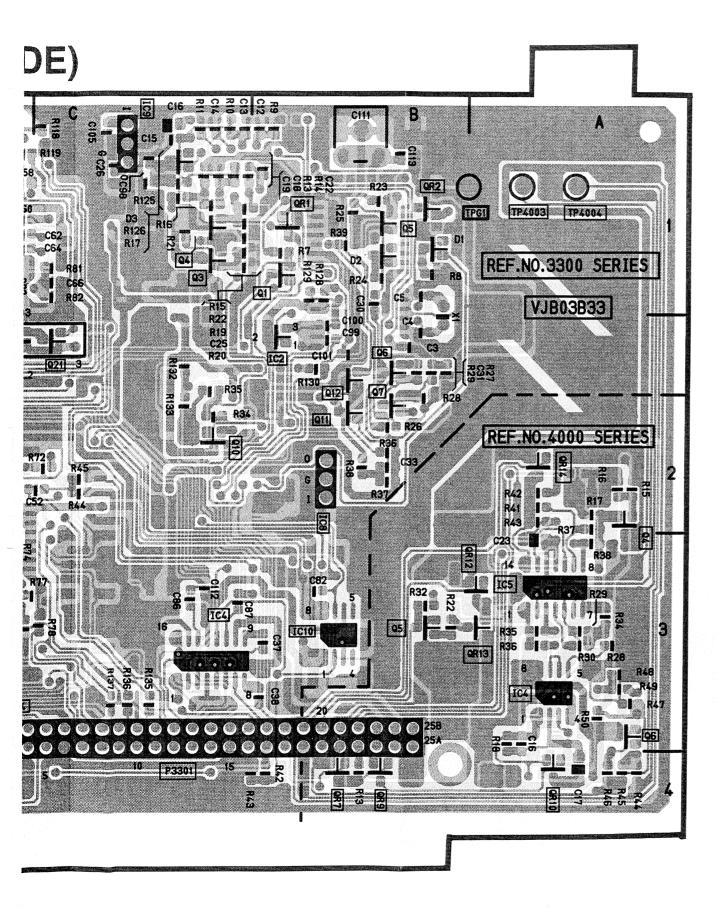
ADDRESS INFORMATION

VIDEO 1						
Transistor		QR3012	B-1			
		- QR3803	A-1			
03001	D-1	QR3802	A-2			
03003	D-2	QR3801	A-2			
03020	D-3	QR3809	A-4			
03019	D-3	QR3004	D-2			
03811	D-4					
03024	C-1	Integrated Circuit				
03022	C-1					
03008	C-2	1C3006	E-2			
03017	C-3	IC3002	D-2			
03012	C-3	IC3005	C-2			
03013	C-3	1C3804	A-3			
03015	C-3	1C3803	A-3			
03009	C-3	IC3801	A-2			
03010	C-3	IC3004	A-3			
03004	B-2					
03806	B-2	Test Point				
03804	A-2		T			
03813	A-1	TP3005	D-3			
03803	A-2	TP3003	C-2			
03802	A-2	TPG3000	B-1			
03007	B-3	TPG3001	B-1			
03819	B-3	TP3001	B-1			
03814	B-3	TP3805	A-1			
03815	B-3	TP3804	A-1			
03811	D-4	TP3801	B-2			
03816	A-3	TP3004	B-3			
03018	A-3	TP3002	D-1			
03812	A-1					
ransistor & esistor		Connector				
		P3001	C-3			
QR3011	B-1	P3002	E-3			

ADDRES INFORMATION

VIDEO (2) C.B.A. (VEP03B33A)





COMPORNENT SIDE

FOIL SIDE

COUR OLDANA	SIDL	TOIL SIDE					
VIDEO 2		VIDEO 2					
Transistor		Transistor	Transistor		D-3		
03308	C-2	03324	E-1	QR3301 QR3302	B-1 B-1		
03309	C-2	03323	E-1	QR4007	B-4		
03302	C-1	03316	E-2	QR4009	B-4		
		03322	D-1	QR4013	A-3		
Transistor & Resistor		03313	D-2	QR4010	A-4		
	T	03315	D-2	QR4012	A-3		
QR4011	A-3	03314	D-3	QR4014	A-2		
		03327	D-3				
Integrated Circuit		03326	D-3	Integrated Circuit			
*****	1	03325	E-3		T		
IC3301	B-2	03328	E-3	IC3307	D-4		
1C3303	C-1	03319	D-3	1C3309	C-1		
1C3309	C-1	03321	C-2	IC3304	C-3		
1C3308	B-2	03304	C-1	IC3310	B-3		
1C3305	D-3	03303	C-1	1C3308	B-2		
1C3306	D-1	03301	B-1	IC3302	B-2		
		03310	C-2	IC4005	A-3		
Test Point		Q4005	B-3	IC4004	A-3		
	Γ	03311	B-2				
TP4004	A-1	03312	B-2	Test Point			
TP4003	A-1	03307	B-2				
TPG3301	A-1	03306	B-2	TP4003	A-1		
	I	03305	B-1	TP4004	A-1		
Adjustment		Q4006	A-3	TPG3301	A-1		
1170000		Q4004	A-2		V-0-1		
VR3306	D-1		L	Connector			
VR3301	D-1	Transistor	& Resistor	<u> </u>			
VR3302	D-1			P3301	C-4		
VR3303	D-1	QR3303	D-3				
VR3304	D-1						
VR3305	E-1	ADDRES INFOR	MATION				
C3411	B-1						

ADDRESS INFORMATION

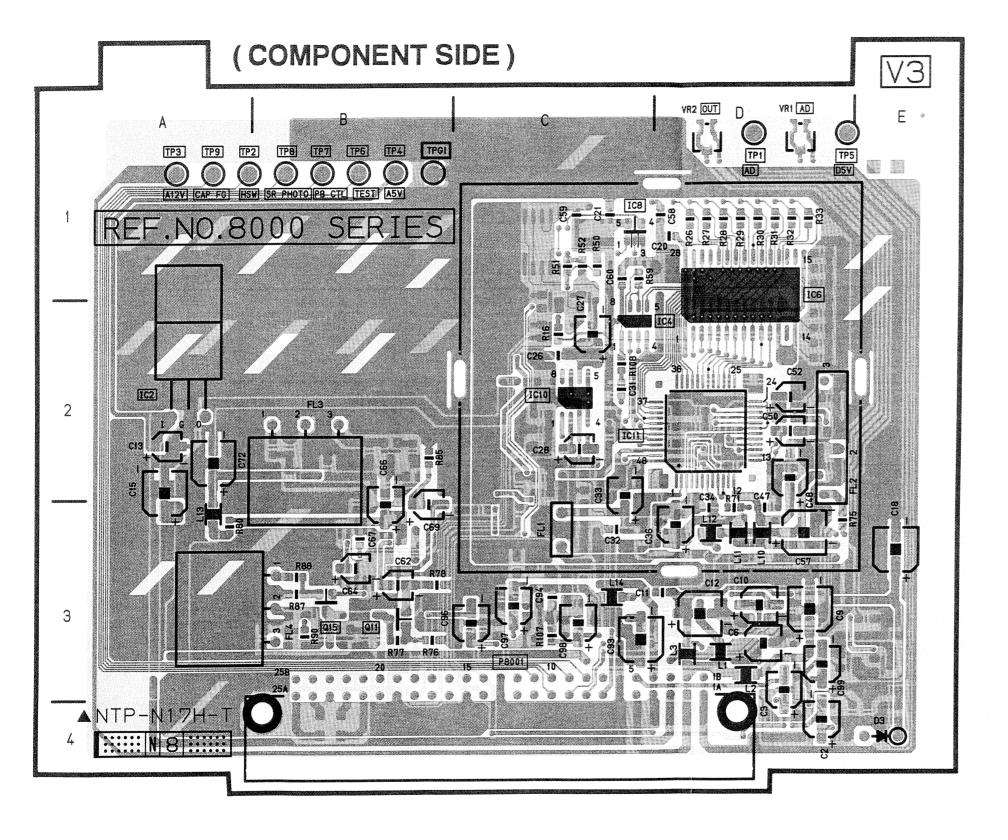
B-3

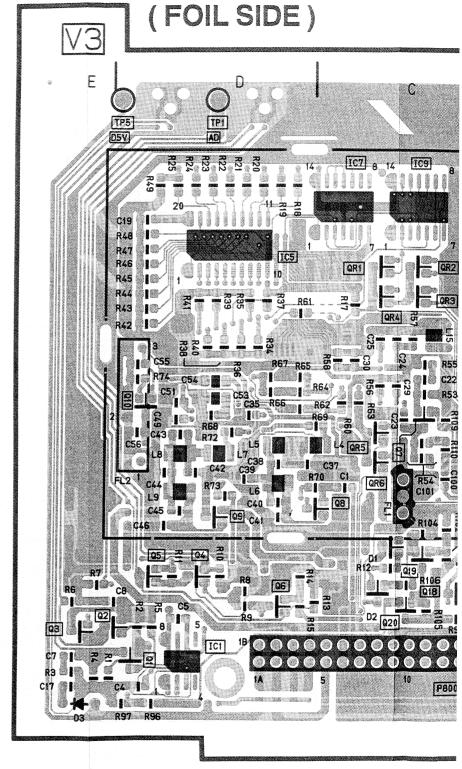
Connector

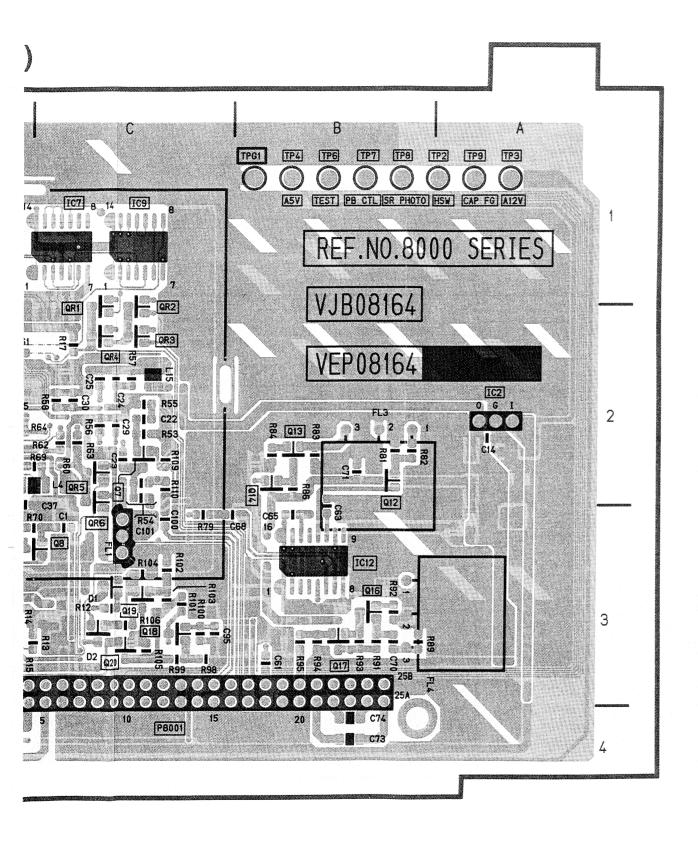
P3301

VIDE-V01109 / DRUCK 58

VIDEO (3) C.B.A. (VEP08164B)







COMPONENT SIDE VIDEO 3 Transistor 08011 B-3 08015 B-3 Integrated Circuit 1C8002 A-2 1C8004 C-2 1C8006 D-1 1C8008 C-1 IC8010 C-2 IC8011 C-2 Test Point TP8001 D-1 TP8002 A-1 TP8003 A-1 TP8004 B-1 TP8005 D-1 TP8006 B-1 TP8007 B-1 TP8008 B-1 TP8009 A-1 TPG8001 B-1 Adjustment VR8001 D-1 VR8002 D-1

ADDRESS INFORMATION

C-1

Connector

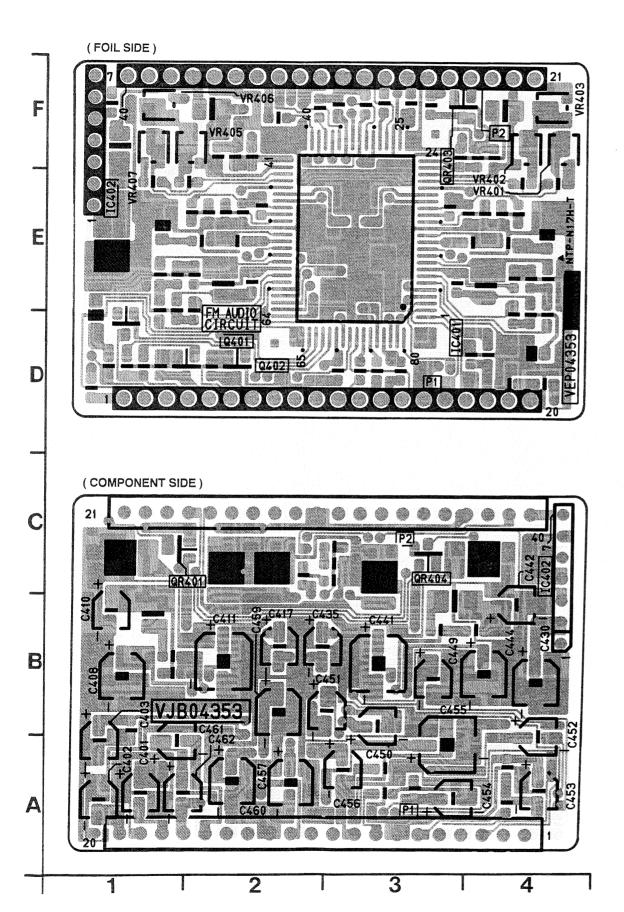
P8001

FOIL SIDE

	VID	EO 3		
Transistor		Test Point		
08001 08002 08003 08004 08005	D-4 E-3 E-3 D-4 D-3	TP8001 TP8002 TP8003 TP8004 TP8005	D-1 A-1 A-1 B-1 D-1	
08006 08007 08008 08009 08010 08012	D-4 C-2 C-3 D-4 D-2 B-2	TP8006 TP8007 TP8008 TP8009 TPG8001	B-1 B-1 B-1 A-1 B-1	
08012 08013 08014	B-2 B-2	Connector		
08016 08017 08018 08019 08020	B-3 B-3 C-3 C-3 C-3	P8001	C-4	
Transistor	& Resistor			
OR8001 OR8002 OR8003 OR8004 OR8005 OR8006	C-2 C-2 C-2 C-2 C-2 C-2			
Integrated Circuit				
IC8001 IC8002 IC8005 IC8007 IC8009 IC8012	D-4 A-2 D-1 C-1 C-1 B-3			

ADDRESS INFORMATION

FM AUDIO PACK C.B.A. (VEP04353B)



FOIL SIDE

FM A	OIOL	FM A	סוםנ
Transistor		Transistor	& Resistor
0401 0402	D-2 D-2	OR401 OR404	C-2 C-3
Transistor	& Resistor	Integrated	Circuit
QR403	F-3	IC402	C-4
Integrated	Circuit	ADDRESS INFO	RMATION
1C402	E-1		
Adjustment			
VR401 VR402 VR403	E-4 E-4 F-4		

F-2

F-2

E-1

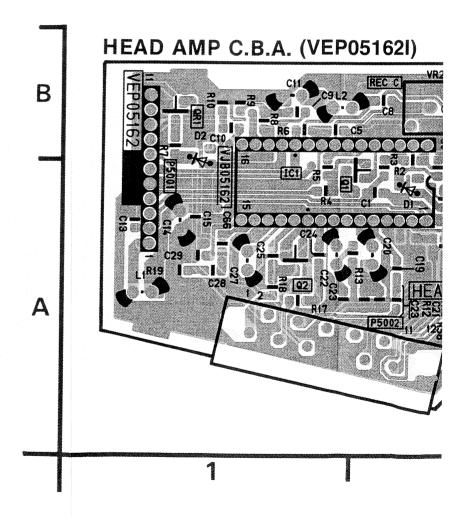
COMPONENT SIDE

ADDRESS INFORMATION

VR405 VR406

VR407

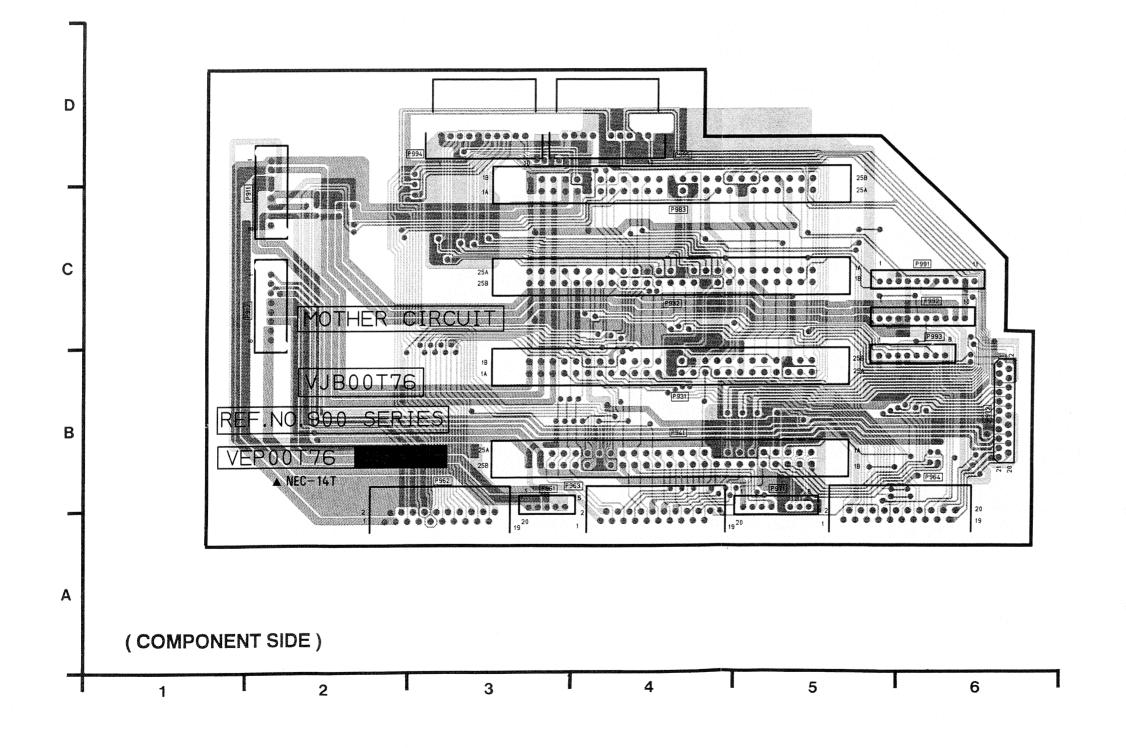
HEAD AMP C.B.A. (VEP05162I)



(VEP05162I) (FOIL SIDE) (FOIL SIDE)

HEAD AMI	C.B.A.
Transistor	
Q5001 Q5002 Q5003 Q5004 Q5005	A-1 © A-1 © A-3 © A-5 © A-2 ©
Transistor	& Resistor
QR5001	B-1 🕞
Integrated	Circuit
IC5001 IC5001 IC5002 IC5003 IC5003	A-1 ① A-4 ② B-4 ② A-3 ② A-4 ③
Adjustment	
VR5001 VR5001 VR5002 VR5002	B-2 (F) B-4 (©) B-2 (F) B-4 (©)
Test Point	
TP5001 TP5001 TP5002 TP5002 TP5003 TP5003	B-2
Connector	
P5001 P5001 P5002 P5002 P5003 P5003	A-1 © A-5 © A-2 © A-5 © A-3 © A-3 ©

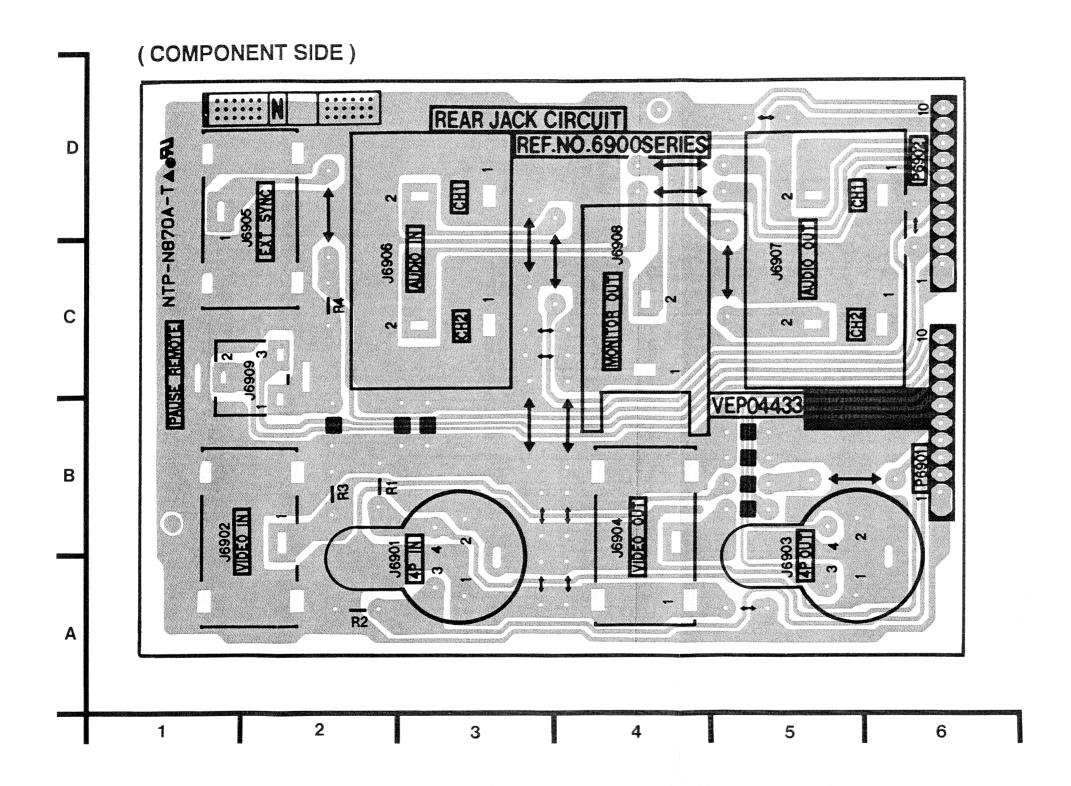
ADDRESS INFORMATION
© ... COMPONENT SIDE
© ... FOIL SIDE



мот	HER
Connector	
P911	C-2
P912	C-2
P931	B-4
P932	C-4
P941	B-4
P961	B-3
P962	B-3
P963	B-4
P964	B-6
P971	B-5
P972	B-6
P983	C-4
P991	C-6
P992	C-6
P993	C-6
P994	D-3
P995	D-4

ADDRESS INFORMATION

REAR JACK C.B.A. (VEP04433A)



SECTION 8

EXPLODED VIEWS REPLACEMENT PARTS LISTS

CONTENTS

SERVING FIXTURES & TOOLS LIST	PRT-2
CHASSIS PARTS SECTION	PRT-3
MOVING PARTS SECTION	PRT-5
CASSETTE COMPARTMENT SECTION	PRT-7
CHASSIS & FRAME SECTION	PRT-8
PACKING PARTS SECTION	PRT-10
ELECTRICAL REPLACEMENT PARTS LIST	PRT-11

NOTES

- 1. Be sure to make your orders of replacement parts according to this list.
 - "<R>" in Remark column indicates recommended parts.
 - "<M>" in Remark column indicates needed in the periodical maintenance.
- 2. IMPORTANT SAFETY NOTICE

Components identified by "<!>" have special characteristics important for safety.

When replacing any of these components, use only the original ones.

Meaning of symbol "<!>" on this parts list is exactly the same as symbol ∆on Schematic and Circuit Board Diagrams.

3. Unless otherwise specified;

All resistors are in (Ω), K=1,000 Ω , M=1,000k Ω .

All capacitors are in (F), $U=10^{-6}$ F, $P=10^{-12}$ F.

4. ITEM NUMBERS WITH CAPITAL LETER E

Item numbers with capital leter E (Example:E1, E2,...) in Ref.No. column mean that the parts are listed with the E item numbers in the exploded views.

- 5. The main assembled parts are shown below C.B.A. marked with "".
- 6. When ordering parts, use parts No. only form Part No. column.
- 7. Printed circuit board assembly with mark (RTL) is no longer available after discontinuation of the product.
- 8. Abbreviations for parts;

-- NAME -- -- DESCRIPTION --

C.CAPACITOR CERAMIC CAPACITOR
C.CAPACITOR CH CERAMIC CHIP CAPACITOR
E.CAPACITOR ELECTROLYTIC CAPACITOR

G.CAPACITOR GLASS CAPACITOR M.CAPACITOR MICA CAPACITOR

P.CAPACITOR PLASTIC FILM CAPACITOR
S.CAPACITOR SEMI-CONDUCTOR CAPACITOR
T.CAPACITOR TANTALUM CAPACITOR

TRIMMER TRIMMER

C.RESISTOR CARBON RESISTOR F.RESISTOR FUSE RESISTOR

M.RESISTOR METAL OXSIDE RESISTOR
M.RESISTOR CH METAL OXSIDE CHIP RESISTOR
S.RESISTOR SOLID RESISTOR

S.RESISTOR SOLID RESISTOR
V.RESISTOR VARIABLE RESISTOR
W.RESISTOR WIRE WOUND RESISTOR

COMBI. TR-R

COMBI. R-R

COMBI. C-R-L

TRANSITOR-RESISTOR COMBINATION PARTS

COMBI. C-R-L

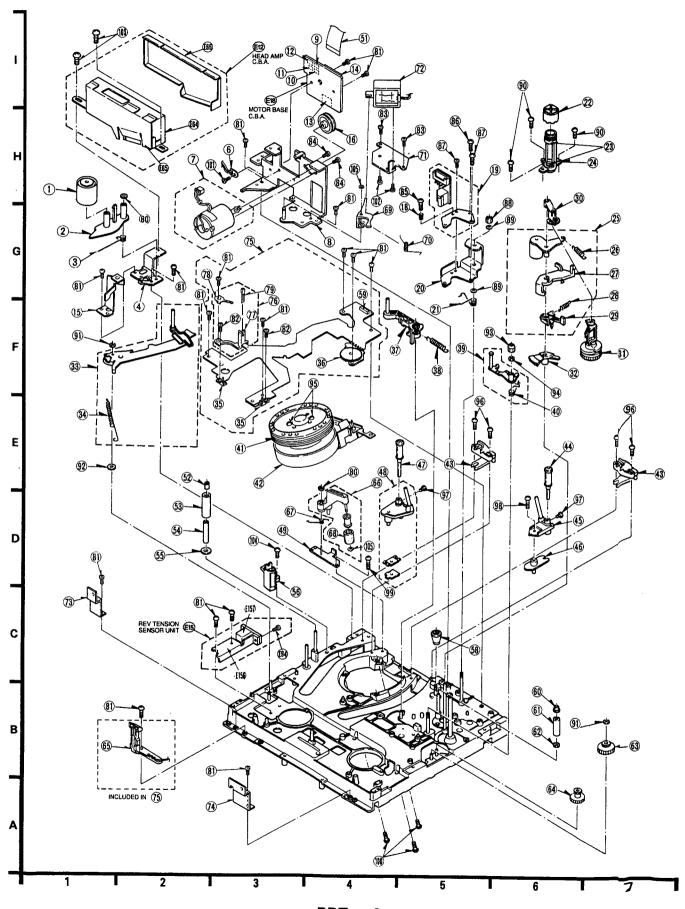
CAPACITOR-COIL COMBINATION PARTS

C.B.A. CIRCUIT BOARD ASSEMBLY

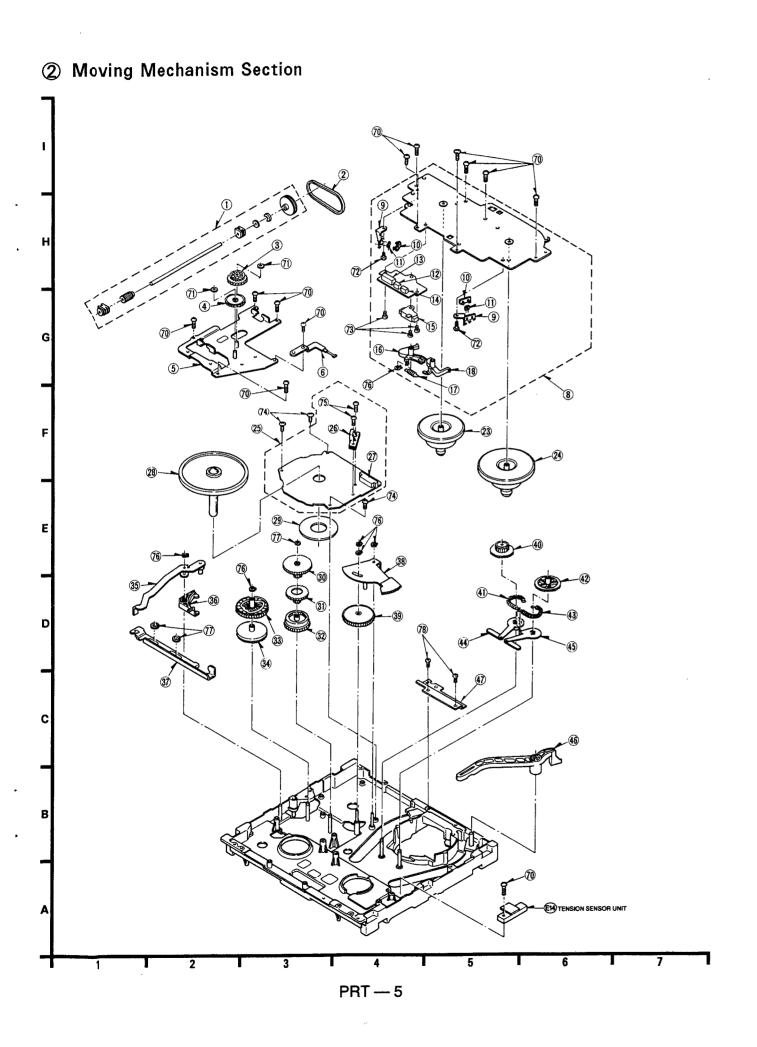
SERVICING FIXTURES & TOOLS LIST

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VFM8180HADH	VHS ALIGNMENT TAPE	1			VFK0335	RETAINING RING REMOVER	1	
	VFK0329	POST ADJ. SCREWDRIVER	1				(3mm/4mm)		
	VFK0132	BACK TENSION METER	1	(T2-H7-UM)		VFK0326	HEX. WRENCH SET	1	
		(TENTELOMETER, MADE IN	<u> </u>			VFK0948	CHECK LIGHT	1	
		U.S.A.)				MOR265	MOLYTONE GREASE	1	
	VFK0191	POST ADJ. PLATE	1			VFK0680	S.C.R. GREASE	1	
	VFK0133	DIAL TORQUEN GAUGE	1			VFK27	HEAD CLEANING STICK	1	
	VFK0180	PLASTIC CLAMPER ONLY	1			VFK0344	POST HEIGHT ADJ. FIXTURE	1	
	VFK0134	ADAPTOR FOR VFK0133	1			VFK0269	L TYPE SCREWDRIVER	- 1	
	VFK0190	REEL TABLE HEIGHT GAUGE	1			VFK66	FAN TYPE TENSION GAUGE	- 7	
	VFK0236	TENSION POST ADJ. FIXTURE	1			VFK0945	EXTENDER BOARD 50P	1	
	VFK0806	TENSION SENSOR ADJ. FIXTURE	1			VFK0828	EXTENDER CODE 8P	-	
	VFK0328	H-POSITION ADJ. SCREWDRIVER	1		7	VFK0131	HIGH QUALITY OIL	1	
	VFK0330	FINE ADJ. SCREWDRIVER	1		1	1	dor E211 OIL		
		(3mm PHI)				+			

EXPLODED VIEWS ① Chassis Parts Section



Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1-1	VXP1075	IMPEDANCE ROLLER UNIT	1		1-78	VMB2020	EARTH SPRING	1	
1-2	VML2293	IMPEDANCE ROLLER ARM	$\frac{1}{1}$		1-79	GL450 VMX1079	LED CUT WASHER	1 2	
1-3	VMB1976	IMPEDANCE SPRING	1		1-81	XTV26+6F	SCREW	14	
1-4	VMA7982	HEAD AMP ANGLE (L)	1		1-82	XTV2+4F	SCREW	2	
1-6	VEK3185	HUMIDITY RESISTOR UNIT	1	<r></r>	1-83	XYN26+K5	SCREW	2	
1-7	VEM0360	LOADING MOTOR UNIT	1	<	1-84	XSN3+3.5	SCREW	2	
1-8	VXA5151	MOTOR BASE (1) UNIT	1		1-85	VHD0322	SCREW	1	
1-9	VJP1229G VJP1229T	COMNECTOR (2P)	1		1-86	VHD0089B	SCREW	1	
1-10	VJP1229R	CONNECTOR (2P) CONNECTOR (2P)	1		1-87	XSN3D6FZ	SCREW	2	
1-12	VJP1230R	CONNECTOR (3P)	1		1-88	VHNO063 XWE4	M4 NYLON NUT	1	<u> </u>
1-13	VJP3106B013	CONNECTOR (13P)	1		1-90	VHD0374	M4 NYLON WASHER SCREW	3	
1-14	VJS1493	CONNECTOR (15P)	1		1-91	VMX0653	CUT WASHER	2	
1-15	VMA8130	IMPEDANCE ROLLER SUPPORT	1		1-92	XWGV3D6G	POLLY SLIDER WASHER	1	
		ANGLE			1-93	VHD0045	M3 NYLON NUT	1	
1-16	VDP1319	MOTOR PULLEY	1		1-94	XWE3VW	M3 WASHER	1	
1-18	VMB1251	ADJUST SPRING	1		1-95	VHD0425	SCREW	2	
1-19	VED0104 VXA3649	A/C HEAD (1) UNIT	1	< M><r></r>	1-96	XTV26+10F	SCREW	4	
1-20	VAA3649 VMB1567	A/C HEAD BASE UNIT			1-97	VHD0133	SCREW	2	
1-22	VXQ0006	A/C HEIGHT SPRING THRUST SCREW UNIT	1		1-98	XYN26+F6FZ	SCREW	1	
1-23	VMX1033	OIL SEAL	2		1-100	XTN3+6F VHD0342	SCREW SCREW	1	
1-24	VXD0101	HOUSING UNIT	1		1-101	XTV2+6J	SCREW	3	
1-25	VXL2367	PRESSURE ROLLER UNIT	1	< ₩>< R>	1-102	XYN26+C4	SCREW	2	
1-26	VMB1977	PINCH PRESSURE SPRING	1		1-103	XTW3+8TR	SCREW	2	
1-27	VXL2368	PINCH PRESSURE ARM	1		1-105	VMX0653	CUT WASHER	11	
1-28	VMB1569	PINCH ARM SPRING	1						
1-29	VML1874	PINCH LIFT ARM	1						
1-30	VMX1353 VDG0577	PINCH CAM ARM	1						
1-32	VDG0577	PINCH CAM PINCH SECTOR GEAR	1		- }				
1-33	VXL2089	TENSION ARM UNIT	1		┨┠━━━				
1-34	VMB1975	TENSION SPRING	1			-	·		
1-35	VSP0293	CASSETTE DETECT SW	2		11				
1-36	VSS0257	MODE SWITCH	1	< 4 >< R >	11				
1-37	VXL1857	SUB LOADING ARM (1) UNIT	1		7				
1-38	VMB1566	SUB POST SPRING	1						
1-39 1-40	VXL2074 VMB1554	P5 ARM UNIT	1		1				
1-40	VEH0437	P5 SPRING UPPER CYLINDER UNIT	1	< M>< R>	╣——	<u> </u>			
1-42	VEG0909	LOWER CYLINDER UNIT	1	<		-			
1-43	VMD0910	POST STOPPER	2	41/1/1/2					
1-44	VXP1094	ROLLER POST (T) UNIT	1		┨├───┼	 			
1-45	VXA3713	INCLINED BASE (T)(1) UNIT	1		11				
1-46	VXA2687	INCLINED ADJUSTMENT PLATE U	1						
1-47	VXP1093	ROLLER POST (S) UNIT	1						
1-48	VXA3249KIT	INCLINED BASE (S)	1						
1-49	VXA3980	HEAD CLEANING PLATE	1		41				
1-51 1-52	VEE8714 VMX1088	FLEXIBLE CABLE SUPPLY UPPER LIMITER	1			ļ			
1-53	VDP1304	SUPPLY ROLLER	1			 			
1-54	VMX1581	P1 COLLAR	1		 	 			
1-55	VMX1533	SUPPLY LOWER LIMITER	1		1				
1-56	VBS0038	FE HEAD	1		1	 			
1-58	VHN0110	ADJUST NUT	1						
1-59	VJS2964A013	CONNECTOR (15P)	1		1 +	1			
1-60	VMX1544	P4 UPPER LIMITER	1						
1-61	VMX1568	P4 SLEEVE	1					\neg	
1-62 1-63	VMX1534 VDG0664	P4 LOWER LIMITER	1		1				
1-64	VDG0483	CONNECTION GEAR PINCH SPEED DOWN GEAR	1		 	 			
1-65	VES0489	SAFETY SWITCH	$\frac{1}{1}$		┨├───┼	-			
1-66	VXL2263	HEAD CLEANING UNIT	1	< M>< R>	┨ ┠━━━┿				
1-67	VMB2532	CLEANING SPRING	1	,	11				
1-68	VMT0321	HEAD CLEANING PAD	1	-	11				
1-69	VML2845	CAM LEVER	1		1				
1-70	VMB2672	CAM LEVER SPRING	1						
1-71	VMA8977	SOLENOID BASE	1					$\neg \dagger$	
1-72	VSJ0111	PINCH SOLENOID	1						
1-73 1-74	VMA6895 VMA6896	MOUNT PLATE (L)	1						
1-74	VMA6896 VXA5166	MOUNT PLATE (R)	1		1				
		BIND FLEXIBLE UNIT	1		41				
	WXA3E20								
1-76	VXA3520 VMD0911	LED UNIT	1		-				
	VXA3520 VMD0911	LED HOLDER	1						

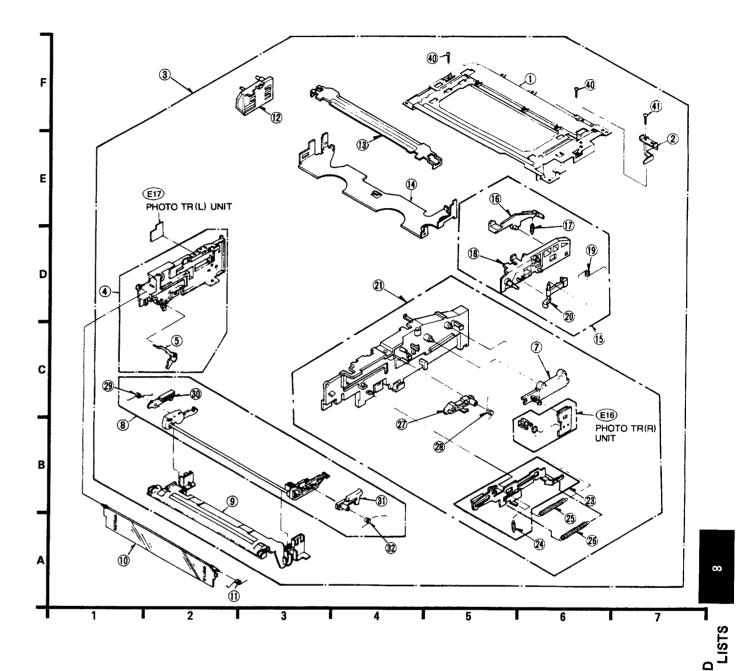


Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	_	Part No.	Part Name & Description	Pcs	Remarks
2-1	VXP1082	WORM SHAFT UNIT	1		3-1	L	VMA7223	TOP PLATE	1	
2-2	VDV0228	LOADING BELT	1	< ₩> < R>	3-2	L	VMA7224	CASSETTE HOLDER ANGLE	1	
2-3	VDG0581	WORM WHEEL	1		3-3	L	VXA4535	CASSETTE COMPERTMENT UNIT	1	
2-4	VDG0582	INTERMEDIATE GEAR	1		3-4	L	VXA4467	SIDE PLATE (L)(1) UNIT	1	
2-5	VXA3646	GEAR BASE (1) UNIT	1		3-5	1	VML1880	OPENER LEVER	1	·
2-6	VXS0098	EARTH SPRING UNIT	1		3-7	╄-	VSS0258	SLIDE SWITCH	1	
2-8	VXA4839	STATOR BASE UNIT	1		3-8	╀	VXP0987	MAIN SHAFT UNIT	1	
2-9	VMD0611	FG SUPPORT (1)	2		3-9	∤-	VMA6900	CASSETTE GUIDE UNIT	1	
2-10	VMD0621	FG SUPPORT (2)	2		3-10	╀	VKF1487	BLINDER PANEL	1	
2-11	HW-300B	HOLE IC	2	< ₹>	3-11	├	VMB1258 VMD1387	BLINDER SPRING HOLDER GUIDE	1	
2-12	VJP1230R VJP3202A008Z	CONNECTOR (3P) CONNECTOR (8P)	1		3-12	╀╌	VXA3831	HOLDER ANGLE UNIT	1	
2-13	VJP1230T	CONNECTOR (3P)	1		3-14	╁	VMA8406	CASSETTE HOLDER	1	
2-14 2-15	VSJ0066	SOLENOID	1		3-15	┢	VXA3780	HOLDER GUIDE (R) UNIT	1	
2-15	VXZ0270	MAIN BRAKE (S) UNIT	1	<r></r>	3-16	┢	VML1882	DOOR OPEN LEVER	1	
2-17	VMB1978	BRAKE SPRING	1		3-17	-	VMB1584	DOOR OPEN LEVER SPRING	1	
	VXZ0314	MAIN BLAKE (T) UNIT	1	<r></r>	3-18	1	VMD1352	HOLDER GUIDE (R)	1	
2-18	VXR0187	TAKEUP REEL TABLE UNIT	1	< ₹>	3-19	H	VMB2013	RELEASE SPRING	1	
2-23 2-24	VXR018/ VXR0225	SUPPLY REEL TABLE UNIT	1	<r></r>	3-19	\vdash	VML2306	RELEASE SPRING	1	
2-25	VAKU225 VEK4097	STATOR UNIT	1	-1-	3-20	Н	VXA4076	SIDE PLATE (R)(1) UNIT	$\frac{1}{1}$	
2-25	VBK0063	MR HEAD	1	< ₹>	3-22		VSS0258	SLIDE SWITCH	1	
2-20	VJP1902	CONNECTOR	1	11"	3-23	Н	VXA3497	SUB RACK UNIT	$\frac{1}{1}$	
2-28	VXP1328	ROTOR UNIT	1		3-24	Н	VMB1962	RACK C SPRING	1	
2-29	VMA6847	SUB PLATE	1		3-25		VMB1943	CLUTCH SPRING (A)	1	
2-30	VDG0580	CENTER GEAR	1		3-26	Н	VMB1942	CLUTCH SPRING (B)	1	<u> </u>
2-30	VXP0878	RETANER GEAR UNIT	1		3-20	Н	VML2427	DOWN SUPPORT LEVER	1	
2-31	VDG0342	RING GEAR	1		3-28	H	VMB1961	DOWN SUPPORT SPRING	$\frac{1}{1}$	
2-32	VDG0578	MAIN CAM GEAR	1		3-29	H	VMB1836	SUB WIPER SPRING (L)	1	<u> </u>
2-33	VDG0378	SUB CAM GEAR	1		3-30	H	VML1876	SUB WIPER ARM (L)	1	
2-34	VXL1895	CAM FOLLOWER ARM UNIT	1		3-30	Н	VML1877	SUB WIPER ARM (R)	1	
2-36	VML1861	DETENT ARM	1		3-32	Н	VMB1837	SUB WIPER SPRING (R)	1	
2-37	VMM0218	MAIN ROD	1		3-40	Н	XTB26+8G	SCREW	2	
2-38	VXA3144	SECTOR GEAR UNIT	1		3-41	Н	XTV26+6F	SCREW	1	
2-39	VDG0579	LOADING CAM GEAR	1		3-42	Н	XTV26+8FR	SCREW	4	
2-40	VDG0420	LOADING GEAR (T)	1		1 3-72	Н	ATTZO-OFK	JUNEA	*	
2-40	VMB1555	LOADING SPRING (T)	1		11	\dashv				
2-42	VDG0593	LOADING GEAR (S)	1		 	-		 		
2-42	VMB1746	LOADING SPRING (S)	1		1	\dashv				
2-43	VXL1489	LOADING ARM (T)(1) UNIT	1		11	\dashv				
2-45	VXL1487	LOADING ARM (S)(1) UNIT	1		 	+				
2-46	VML2304	CLEANING ROD	1		┨┣━━━	+		 	-	
2-47	VMA8003	MOUNT PLATE (B)	1		11	\dashv	• • • • • • • • • • • • • • • • • • • •		\dashv	
2-70	XTV26+6F	SCREW	12		11	+				
2-71	VMX0653	CUT WASHER	2		1	+				
2-72	XYN2+F5	SCREW	2		11	+				
2-73	XSN26+4	SCREW	3		∦	+			-	
2-74	XYEV0004	SCREW	3		11	+			-	
2-75	XYNV0015	SCREW	2		11	1				
2-76	XUEV3VW	WASHER	6			+			+	
-77	XUEV3VW	CUT WASHER	3			+			+	
-78	XTV3+8F	SCREW	2			+	· · · · · · · · · · · · · · · · · · ·		+	******
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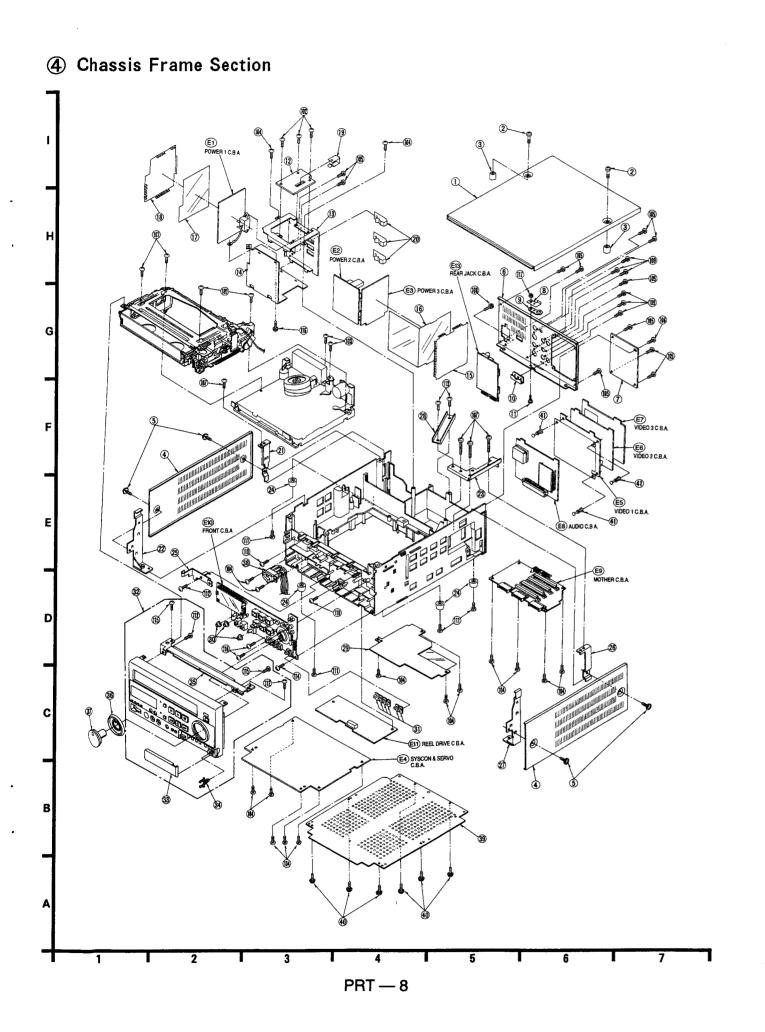
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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
2-1	VXP1082	WORM SHAFT UNIT	1		3-1	VMA7223	TOP PLATE	1	
2-2	VDV0228	LOADING BELT	1	<m><r></r></m>	3-2	VMA7224	CASSETTE HOLDER ANGLE	1	
2-3	VDG0581	WORM WHEEL	1		3-3	VXA4535	CASSETTE COMPERTMENT UNIT	1	
-4	VDG0582	INTERMEDIATE GEAR	1		3-4	VXA4467	SIDE PLATE (L)(1) UNIT	1	
?-5	VXA3646	GEAR BASE (1) UNIT	1		3-5	VML1880	OPENER LEVER	1	
2-6	VXS0098	EARTH SPRING UNIT	1		3-7	VSS0258	SLIDE SWITCH	1	
2-8	VXA4839	STATOR BASE UNIT	1		3-8	VXP0987	MAIN SHAFT UNIT	1	
2-9	VMD0611	FG SUPPORT (1)	2		3-9	VMA6900	CASSETTE GUIDE UNIT	1	+
-10	VMD0621	FG SUPPORT (2)	2		3-10	VKF1487	BLINDER PANEL	1	
2-11	HW-300B	HOLE IC	2	<₽>	3-11	VMB1258	BLINDER SPRING	1	
-12	VJP1230R	CONNECTOR (3P)	1		3-12	VMD1387	HOLDER GUIDE	1	
2-13	VJP3202A008Z	CONNECTOR (8P)	1		3-13	VXA3831	HOLDER ANGLE UNIT	1	l
-14	VJP1230T	CONNECTOR (3P)	1		3-14	VMA8406	CASSETTE HOLDER	1	
-15	VSJ0066	SOLENOID	_		3-15	VXA3780	HOLDER GUIDE (R) UNIT	1	
-16	VXZ0270	MAIN BRAKE (S) UNIT	1	<r></r>	3-16	VML1882	DOOR OPEN LEVER	1	
-17	VMB1978	BRAKE SPRING	1		3-17	VMB1584	DOOR OPEN LEVER SPRING	1	
-18	VXZ0314	MAIN BLAKE (T) UNIT	1	<r></r>	3-18	VMD1352	HOLDER GUIDE (R)	1	
-23	VXR0187	TAKEUP REEL TABLE UNIT	1	<₽>	3-19	VMB2013	RELEASE SPRING	1	
-24	VXR0225	SUPPLY REEL TABLE UNIT	1	<₽>	3-20	VML2306	RELEASE LEVER	1	
-25	VEK4097	STATOR UNIT	1		3-21	VXA4076	SIDE PLATE (R)(1) UNIT	1	
-26	VBK0063	MR HEAD	1	<r></r>	3-22	VSS0258	SLIDE SWITCH	1	
-27	VJP1902	CONNECTOR	1		3-23	VXA3497	SUB RACK UNIT	1	
-28	VXP1328	ROTOR UNIT	1		3-24	VMB1962	RACK C SPRING	1	
-29	VMA6847	SUB PLATE	1		3-25	VMB1943	CLUTCH SPRING (A)	1	
2-30	VDG0580	CENTER GEAR	1		3-26	VMB1942	CLUTCH SPRING (B)	1	
-31	VXP0878	RETANER GEAR UNIT	1		3-27	VML2427	DOWN SUPPORT LEVER	1	
-32	VDG0342	RING GEAR	1		3-28	VMB1961	DOWN SUPPORT SPRING	1	
-33	VDG0578	MAIN CAM GEAR	1		3-29	VMB1836	SUB WIPER SPRING (L)	-	
-34	VDG0343	SUB CAM GEAR	1		3-30	VML1876	SUB WIPER ARM (L)	1	
-35	VXL1895	CAM FOLLOWER ARM UNIT	1		3-31	VML1877	SUB WIPER ARM (R)	1	
-36	VML1861	DETENT ARM	1		3-32	VMB1837	SUB WIPER SPRING (R)	$\frac{1}{1}$	L
-37	VMM0218	MAIN ROD	1		3-40	XTB26+8G	SCREW		
								2	
-38	VXA3144	SECTOR GEAR UNIT	1		3-41	XTV26+6F	SCREW	1	
-39	VDG0579	LOADING CAM GEAR	1		3-42	XTV26+8FR	SCREW	4	ļ
-40	VDG0420	LOADING GEAR (T)	1			ļ			
-41	VMB1555	LOADING SPRING (T)	1		4	<u> </u>			
-42	VDG0593	LOADING GEAR (S)	1						
-43	VMB1746	LOADING SPRING (S)	1						
-44	VXL1489	LOADING ARM (T)(1) UNIT	1	-					
-45	VXL1487	LOADING ARM (S)(1) UNIT	1						
-46	VML2304	CLEANING ROD	1		1				
-47	VMA8003		1						
-70	XTV26+6F		12						L
-71	VMX0653	CUT WASHER	2						
-72	XYN2+F5	SCREW	2						
-73	XSN26+4	SCREW	3						
-74	XYEV0004	SCREW	3		<u> </u>				
-75	XYNV0015	SCREW	2						
-76	XUEV3VW	WASHER	6						i
-77	XUEV3VW	CUT WASHER	3						
-78	XTV3+8F	SCREW	2						
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3 Cassette Compartment Section



PRT — 6



Ref.No.	Part No.	Part Name & Description	Pc	s Remarks	Ref.No.	Part No.	Part Name & Description	n Pc	Remarks
4-1	VGM1106	TOP PLATE	1		5-1	VQT5833	OPERATING INSTRUCTIONS	1	
4-2	VHD0222	SCREW	2		5-2	VPN3813	CUSHION (REAR)	1	
4-3	VMX2248	TOP PANEL SPACER	2		5-3	VPN3814	CUSHION (FRONT)	1	
4-4	VGM1055	SIDE PLATE	2		5-4	VJA0746	POWER CORD		ROUND PIN
4-5 4-6	VHD0305 VXA5159	JACK PANEL	4		5-4	VJA0738	POWER CORD	1	
4-0	VMP2376	RS-232C COVER	1	+	5-5 5-6	VPF0136 VPG7276	POWER CORD SHEET PACKING CASE	1	
4-8	VMC0993	HOOK SPRING	1		-	Vr0/2/6	PACKING CASE	+-	
4-9	VGK2091	HOOK	1		1			+	
4-10	VMP4250	SUPPORT ANGLE	1		11			\neg	
4-11	VHD0052	SCREW	1						
4-13	VSC4009	HEAT SINK (A)	1		↓				
4-14	VSC4005	HEAT SINK (B)	1		∦				
4-15	VSC4006 VMZ2247	POWER SHIELD COVER (A) SHIELD SHEET (B)	1						
4-16 4-17	VMZ2247	SHIELD SHEET (A)	1		┨├───┼	 		+-	
4-18	VSC4007	POWER SHIELD COVER (B)	1	 	┨┠───┼	 			
4-19	VMC0981	TR. SUPPORT SPRING (1)	1		┨┠	 		+	
4-20	VMC0357	TR. SUPPORT SPRINT (2)	3		1			_	
4-21	VMP4254	SIDE PLATE ANGLE (REAR L)	1		1			 	
4-22	VXA5157	SIDE PLATE ANGLE (FRONT L)	1					1	
4-23	VMP4253	TOP PLATE ANGLE	1						
4-24	VKA0117	FOOT	4		\parallel	ļ			
4-25	VMC1001	EARTH SPRING	1		-	 			
4-26 4-27	VMP4255 VXA5158	SIDE PLATE ANGLE (REAR R)	1		┨┣╼╼╼╾┤	 	-		<u> </u>
4-27	VXA5158 VXA5160	SIDE PLATE ANGLE (FRONT R) P.C.B. SUPPORT ANGLE	1	 	+	 			
4-29	VMP3842	SHIELD PLATE	1		+	+		-	
4-30	VGU6509	VOLUME KNOB	3	-	11	 		+	
4-31	VGU6516	SLIDE KNOB	6		11			+	
4-32	VYP5452	FRONT PANEL	1						
4-33	VKW1848	OPERATION DOOR	1						
4-34	VGQ1442	PEACE	1						
4-35	VMP4247	LEINFORCE ANGLE	1		∤ ∔	<u> </u>		1	
4-36 4-37	VGU6554 VXU1139	SHUTTLE RING JOG DIAL	1		┨┝──┼			\perp	
4-38	VES0708	POMER SWITCH	1		┧┠───┼	ļ			
4-39	VKU0394	BOTTOM PLATE	1		 	 		+	
4-40	VHD0059	SCREW	6		 		 	+	
					11	 			
								+	
4-101	XTV26+8FR	SCREW	4						
4-103	XTW3+8TFR	SCREW	3		<u> </u>				
4-104 4-105	XTV3+10JFR XTB3+8FFZ	SCREW SCREW	18		 	ļ	-		
4-105	XTB3+12FFZ	SCREW	9		l -	ļ	<u> </u>	4-4	
4-107	XTV3+10G	SCREW	4		l 	 		+-+	
4-108	XTB4+10FFN	SCREW	1					1-1	
4-109	XTV3+8GFZ	SCREW	5				 	+-	
4-110	XTV4+8F	SCREW	2				1	† †	
4-111	XTV3+16G	SCREW	4						
4-112	XTV3+8G	SCREW	3						
4-113 4-114	XTV3+8FFR XTV4+10JFR	SCREW SCREW	2		 	ļ		1-1	
4-114	XTW3+10JFR	SCREW	2		 		 	+	
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1-1 1999-15 150	1-1 100-100 150					5-2	VPN3813	CUSHION (REAR)] /
Color	Color									4
4.4 1900.00 10	4.4 1900.00 10	4-5	VHD0305							1 1/
1.5 1.5000 1.500	1	4-6	VXA5159	JACK PANEL	1	5-5	VPF0136	POWER CORD SHEET		1 /
1.000 1.00	4. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					5-6	VPG7276			1 '
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1-1 1/2000	1-10 1000000 1441 1810 (10) 1 1 1 1 1 1 1 1 1	4-11	VHD0052	SCREW	1				+	1
9-15 (VSCORE) PARE DUEL CONTE (E) 1 1 1 1 1 1 1 1 1 1	4-15 (1990) (199									
1-10	1-10 1 1 1 1 1 1 1 1 1						+			, n
## PROPERTY OF THE PROPERTY OF	6-20 WC2546 STELD SETE (1) 1 1 1 1 1 1 1 1 1			SHIELD SHEET (B)				- 		1
4.11 SCORET SCORET SCORE (1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1. 15 SCOOT			SHIELD SHEET (A)		11			- 	1
4-00 WERSES DE PLATE (2) 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4-20 WINDLY DE PREFER SPIRE (2) 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	4-18	VSC4007	POWER SHIELD COVER (B)						」 →
4-72 WHOSH SIZE RATE MALE (OMAL) 1	4-21 WHICH SIZE PART MALE (ORD.) 1 1									
4-22 WANSES SUPE PLATE MALE (1909 IL) 1 1 1 1 1 1 1 1 1	4-22 WANNEY SIFF PLATE ANGE (1907 1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						 			1 1
#-29 WERGES TOP PART WASE 1	## ## ## ## ## ## ## ## ## ## ## ## ##					1	1	-		ا د
- 5-5 (MODIT) FOUT 6	-58 W0012 FOUT FOUT FOUT 1 1 1 1 1 1 1 1 1	4-23	VMP4253	TOP PLATE ANGLE	1	1				١
4-26 Weekles Size RATE Mark (ROW 1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4-86 WP455 SIRE PATA MAC (ROW 1)	4-24	VKA0117	F00T	4					1
## 1 WASSIS SIZE FORT MARE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	## 1			EARTH SPRING		-				ļ !
1-28 Westing F.C.S. SPERST MRE 1 1 1 1 1 1 1 1 1	## 1 PASIS P			SIDE PLATE ANGLE (REAK K)		┨┝───┤	+			, →
4-90 Wessel SIGLE PAIR 1 1 1 1 1 1 1 1 1	## ## ## ## ## ## ## ## ## ## ## ## ##			P.C.B. SUPPORT ANGLE		┨┣───┤	+	+	-	ļ 1
## 1	1-53 VORNEY VORNEY VORNEY SOR S S S S S S S S S	4-29	VMP3842	SHIELD PLATE	1]			+	
1-30 VPP-92 RORF PARE 1	1-32 WINDS PROFESSION 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			VOLUME KNOB						F
4-34 NORMAN OPENITOR DOR 1 5-34 NORMAN OPENITOR DOR 1 6-35 NORMAN OPENITOR DOR 1 6-36 NORMAN OPENITOR DOR 1 6-37 NORMAN OPENITOR DOR 1 6-39 NORMAN OPENITOR DOR 1 6-39 NORMAN OPENITOR DOR 1 6-40 NORMAN OPENITOR DOR 1 6-40 NORMAN OPENITOR DOR 1 6-60 NORMAN OPENITOR	4-33 Modified PORTION DOOR 1									·
4-55 PROSE LEIP OFFICE MALE 1	4-53 WOUNDER STORY LET PROTECT AND E 1					┨	+	 		l 1
4-36 Medigar	4-39 WPEGAY LEPRONCE MALE 1					11	+	 		
4-37 (WILLIS P. WILLIS P.	4-37 (WILLISS) MODES STOTICH 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4-35	VMP4247	LEINFORCE ANGLE	1					, –
4-89 (W60598 S0FN FATE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	## SENSOR ## SEN									
4-90 W000599 SCRW 6 6 6 6 6 6 6 6 6	4-40 MODOSP SORW 6 6 6 6 6 6 6 6 6					∤ ├──┤	 			
4-40 W00099 S25EW 6 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	4-40 W00099 SSRW 6 4-101 XTV24-6FR SCRW 4 4-103 XTV24-6FR SCRW 3 1-104 XTV21-104 SCRW 3 1-105 XTV24-6FR SCRW 3 1-1					┨┢──┤	 			Ε
1-101 XTV26-9FR SSEM 4	-101					11	+	 		·
4-101 XY19-10FR SORN 3 1 1 1 1 1 1 1 1 1	1-103									j
4-103 X789-98TR SORN 3	1-103	- 120	VTUOC : OCC	CONCIL	4	4	ļ			
1-104 XTV9-1GUFR SCREW 18 18 19 19 19 19 19 19	10					╂──┼	+			, 7
1-105 XTB3-46FT SORW 9	HIDS XIRS-102FT SORIN 9					11	†	 	+	I
## 100 XTM9-106F SOREM 4	1-107 X79-106 X9RW 4	4-105	XTB3+8FFZ	SCREW	9					
1 1 1 1 1 1 1 1 1 1	### 1									D
1-10	1-100 XIY3-86F2 SORW 5	4-10/	XIV3+10G			∤ }	-			
#-110 XTW-HSF SORN 2 2	EXPLODED VIEWS AND A SORPH 4 SORPH 2 SORPH 4 SORPH 2 SORPH 4 SORPH 2 SORPH 4 SORPH 2 SORPH 4 SORPH 2 SORPH 2 SORPH 4 SORPH 3 SORPH 4 S	4-109	XTV3+8GFZ			 	-			
HIII XIVSHIGE SOREM 4	EXPLODED VIEW SURM 3	4-110	XTV4+8F	SCREW		11	1			
EXPLODED VIEWS AND PARTY LISTS	HILL STRAYDER SIZEM 2 HILL STRAYDER SIZEM 1 HILL STRAYDER SIZEM 2	4-111	XTV3+16G	SCREW						
EXPLODED VIEWS AND THE PRINCE CONTRACTOR OF TH	HIS THATOR SORW 1	4-112	XTV3+8G	SCREW	3					
HIS XWS+IOLR SORM 2 EXPLODED VIEWS AND B REPLACEMENT PARTS LIST A 1 2 3	HIS XWG+IUR SORN 2 EXPLODED VIEWS AND B REPLACEMENT PARTS LIST A T 1 2	4-113	XTV3+8FFR	SCREW		-	ļ	ļ		
EXPLODED VIEWS AND	EXPLODED VIEWS AND REPLACEMENT PARTS	4-114	XTW3+10JFK	SCREW	2	 	-	-		ည္ ငု
EXPLODED VIEWS AND	EXPLODED VIEWS AND REPLACEMENT PARTS		71110-1001			11				<u>⊗</u>
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Ref.No.	Part No.	Part Name & Description	-		Ref.No.	Part No.	Part Name & Description	Pc	Remarks
	VEP04433A	P.C.BOARD W/COMPONENT	1	(RTL)∢R>					
		JACK	-		*********	VEP04433A	P.C.BOARD W/COMPONENT	L	
	VEP01597A	P.C.BOARD W/COMPONENT	1	(RTL)⊲R>	╢		JACK	-	
		POWER INPUT	Ť	(112) 11	1 			+-	
			1		11			╁	
	VEP01598A	P.C.BOARD W/COMPONENT	1	(RTL)∢R>	11	1		╁╴	
		POWER (1)						╈	
	WEDO! FOO!		<u> </u>	· · · · · · · · · · · · · · · · · · ·	1				
	VEP01599A	P.C.BOARD W/COMPONENT	1	(RTL)∢R>	10001	 		_	
		POWER (2)	├		J6901 J6902	VJS3155 VJS3154	CONNECTOR (FEMALE)	1	
	VEPOOT76A	P.C.BOARD W/COMPONENT	1	(RTL)∢R>	J6903	VJS3154 VJS3155	CONNECTOR (FEMALE) CONNECTOR (FEMALE)	1	
	1	MOTHER	╁╌	(1112) 412	J6904	VJS3154	CONNECTOR (FEMALE)	1	
			T		J6906,07	VJJ0323	RCA PIN JACK	2	
	VEP02399A	P.C.BOARD W/COMPONENT	1	(RTL)∢>	J6908	VJJ0322	RCA PIN JACK	1	
		REEL DRIVE			J6909	VJJ0169	REMOCON JACK	1	
			_						
	VEP03B32A	P.C.BOARD W/COMPONENT	1	(RTL)∢R>	/				
	VEPOOR78A	VIDEO (1) P.C.BOARD W/COMPONENT	-	(07) J.O.	Decor. 00	V.100400010		<u> </u>	ļ <u>.</u>
	TEFOUR/OA	P.C.BOARD W/COMPONENT CCD PACK	1	(RTL)∢R>	P6901,02	VJP3490B10	CONNECTOR (MALE)	2	
		YOU I FINI			┨├╴──┼			-	
	VEP03B33A	P.C.BOARD W/COMPONENT	1	(RTL)∢R>	<u> </u>	 		+-	
		VIDEO (2)			1		RESISTORS	+	
					R6901-03	EROS2CKF75RO	M.RESISTOR 1/4W 75.0	3	<u> </u>
	VEP04432B	P.C.BOARD W/COMPONENT	1	(RTL) <r></r>				1	
		AUDIO						1	
	VEP043538	P.C.BOARD W/COMPONENT	1	(RTL)∢R>	↓				
		FM AUDIO PACK	-		┨┝──┼	-	MISCELLANEOUS		
	VEP05162I	P.C.BOARD W/COMPONENT	1	(RTL)∢R>	{├	VMP4259	REAR MIC ANGLE	1	
	72. 031021	HEAD AMP	-	(NIE)4K	1 }─────┼	-		 	
					!			┼	
	VEP06920B	P.C.BOARD W/COMPONENT	1	(RTL)∢R>	 			+	
		SYSCON & SERVO						+-	
					*********	VEP01597A	P.C.BOARD W/COMPONENT		
	VEP06921B	P.C.BOARD W/COMPONENT	1	(RTL)∢R>			POWER INPUT		
		FRONT	ļ		 	ļ			
	VEP08164B	P.C.BOARD W/COMPONENT	1	(RTL)< R >	{ }			 	
	VEI 00104B	VIDEO (3)	<u> </u>	(NIL)AN	{ } −−−− +	·		-	
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							CAPACITORS	\vdash	
			L		C1101,02	ECQU2A224MN	P.CAPACITOR 100V 0.22U	2	
			_			<u> </u>			
-+					F1101,02	VDAOCOETULE	FIEC	<u> </u>	
	 		-		1101,02	XBA2C25TH15	FUSE	2	
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			L						
<u>-</u> -					P1101	VJS2985	CONNECTOR (FEMALE)	1	
			\vdash		P1102	VJP2639	CONNECTOR (MALE)	1	
					 	 			
	-		\vdash		 	+			ļ
					 		RESISTORS		
					R1101	ERC12GM334	S.RESISTOR 1/2W 330K	1	
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							MISCELLANEOUS		
				······································		VJF0318	FUSE HOLDER	4	
			-		 	VMZ0429	FUSE COVER	2	
		1	Li		 -	VMZ1305	CAPACITOR COVER	2	
			1						
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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
			-		=======================================	VEP01599A	P.C.BOARD W/COMPONENT	-	
*******	VEP01598A	P.C.BOARD W/COMPONENT	_				POWER (2)	†	
		POWER (1)						T	
			ļ						
			-		_			<u> </u>	
		CAPACITORS	-		- I	FOATAFTOOT	CAPACITORS	<u> </u>	
1001	ECQU2A224MN	P.CAPACITOR 100V 0.22U	1	< >	C1019 C1020	ECA1AFZ331	E.CAPACITOR 10V 330U	1	
1002-05	VCK0041	C.CAPACITOR 100V 0.220	4		C1020	ECEA1AGE471	E.CAPACITOR 10V 470U	1	ļ
1012	ECEC2GC221DB	E.CAPACITOR 400V 220U	1	~!>	C1021 C1022-25	ECQV1H104JZ ECKF1H103ZF	P.CAPACITOR 50V 0.1U C.CAPACITOR 50V 1000P	1	
1013	ECQE6473KF	P.CAPACITOR 4001 2200	1		C1022-23	ECEA1HFS101	E.CAPACITOR 50V 100U	1	
1014	ECKD3D151KB	C.CAPACITOR 2KV 150P	1		C1027	ECA1VFQ681	E.CAPACITOR 35V 680U	1	
1015	ECA1VXLV470	E.CAPACITOR 35V 47U	i	<u> </u>	C1028	ECEAIVGE471	E.CAPACITOR 35V 470U	1	
1017	ECKF1H102KB	C.CAPACITOR 50V 100P	1		C1029	ECEA1CGE221	E.CAPACITOR 35V 4700	1	
1018	ECAOGXLV331	E.CAPACITOR 4V 330U	1		C1030	ECKD2H101KB	C.CAPACITOR 500V 100P	1	
1038	ECKF1H271KB	C.CAPACITOR 50V 270P	1		C1031	ECA1EFZ471	E.CAPACITOR 25V 470U	1	
	1		Ť		C1032	ECEA1EGE471	E.CAPACITOR 25V 470U	1	
	1		1		C1033	ECKD2H101KB	C.CAPACITOR 500V 100P	1	
					C1034	ECA1AFZ122	E.CAPACITOR 10V 1.2U	1	
1001	D3SBA60	DIODE	1	<r><1></r>	C1035	ECKF1H103ZF	C.CAPACITOR 50V 1000P	1	
1005	MA723	DIODE	1	<r></r>	C1036	ECEA1AGE221	E.CAPACITOR 10V 220U	1	
1014	AP01C	DIODE	1	< R >	C1037	ECKD2H221KB	C.CAPACITOR 500V 220P	1	
1015	VSD0001	DIODE	1	<r></r>	11		2237 2201	Ė	
1016	MA4240-H	DIODE	1	<r></r>					
			Ţ		D1006	AK04	DIODE	1	∢ R>
					D1007	VSD0001	DIODE	1	∢ R>
C1001	STRM6545LF	IC	1	<r><!-- --></r>	01008	RL4Z	DIODE	1	< ₹ >
					D1010	FMLG12SP	DIODE	1	< ₹ >
					D1011	FMB-G14L	DIODE	1	∢ R>
					D1012	UPC1093J	DIODE	1	∢>
1001	ELF18D602	COIL	1		D1017	RL4Z	DIODE	1	∢R>
1003	VLP0074	COIL	1						
1009	EXCELSA35	COIL	1						
	<u> </u>		L						
					IC1002	S13120CA	IC	1	∢ R>
1001	W 1000 20	COMMITTON (MALE)	١.					ļ	
1001	VJP2639	CONNECTOR (MALE)	1						
	·	 	-					-	
					L1004	VLQ0410	COIL	1	
	+	RESISTORS	├		L1005,06	VLQ0592	COIL	2	
1001	ERF5TK2R2	W.RESISTOR 5W 2.2	1		L1007	VLQEL06F101J VLP0083	COIL 100UH	1	
1002-04	ERG1SJ473	M.RESISTOR 1W 47K	3	71-	11008	VLF0063	COIL	1	
1005	ERG3SJ393	M.RESISTOR 3W 39K	1			+			<u> </u>
1006	ERDS2FJ221	C.RESISTOR 1/4W 220	1			 -		<u> </u>	
1007	ERDS2FJ271	C.RESISTOR 1/4W 270	1		P1002,03	VJP3324	CONNECTOR (MALE)	2	-
1008	ERDS2FJ471	C.RESISTOR 1/4W 470	1		1 -202,00	1	COMMEDIAN (IPEC)	 '	
1009	ERW1PKR56	W.RESISTOR 1W 0.56	1			†		 	
1010	EROS2FJ152	C.RESISTOR 1/4W 1.5K	1		1			-	
1011	ERDS2FJ101	C.RESISTOR 1/4W 100	1		01001	PC111LY1	TRANSISTOR	ī	∢;>
1012	ERDS2FJ103	C.RESISTOR 1/4W 10K	1			T			
1019	ERDS2FJ224	C.RESISTOR 1/4W 220K	1						
1020	ERDS1TJ395	C.RESISTOR 1/2W 3.9M	1		1	1			
1021	ERDS1TJ475	C.RESISTOR 1/2W 4.7M	1		7		RESISTORS	-	
		I .	T		R1013	ERDS2TJ271	C.RESISTOR 1/4W 270	1	
		T			R1014	ERDS2TJ561	C.RESISTOR 1/4W 560	1	
					R1015	EROS2CKG1801	M.RESISTOR 1/4W 1.8K	1	
		MISCELLANEOUS	1		R1016	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
	VMZ0954	CAPACITOR COVER	4		R1017	EROS2CKG1301	M.RESISTOR 1/4W 1.3K	1	
	VMZ1305	CAPACITOR COVER	1		R1018	ERQ12HJ4R7	F.RESISTOR 1/2W 4.7	1	
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			Ι.		T1001	VLT0731	TRANSFORMER	1	
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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
*********	VEP00T76A	P.C.BOARD W/COMPONENT							
		MOTHER	-		J2701	ERJ6GEYOROO	M.RESISTOR CH 1/10W 0	1	
			_		L2701-04	VLQ0460	COIL	4	
						1140100	COIL	_	
			<u> </u>						
911,12	VJS3324	CONNECTOR (FEMALE)	2		P2701	VJS3135	CONNECTOR (FEMALE)	1	
931,32	VJS2898A050 VJS2898A050	CONNECTOR (FEMALE) CONNECTOR (FEMALE)	2		P2702 P2703	VJS2149W VJS3202B008	CONNECTOR (FEMALE) CONNECTOR (FEMALE)	1	
962-64	VJP3203A020Z	CONNECTOR (MALE)	3		P2704,05	VJS1412	CONNECTOR (FEMALE)	2	
972	VJS2889A021	CONNECTOR (FEMALE)	1					Ē	
983 994,95	VJS2898A050 VJS3490A10	CONNECTOR (FEMALE) CONNECTOR (FEMALE)	2					ļ	
551,50	7033730/120	CONNECTOR (FEFFEE)			Q2701	MSD601-R	TRANSISTOR	1	<r>></r>
-		MISCELLANEOUS						+-	
	XNG26BFZ	NUT	8		QR2701	MRN1404	TRANSISTOR-RESISTOR	1	∢?>
	XYN26+C8FZ	SCREW	8					ļ	
								-	
							RESISTORS		
			\vdash		R2701 R2702,03	ERJ6GEYG102 ERJ6GEYJ103	M.RESISTOR CH1/16W 1K M.RESISTOR CH1/16W 10K	2	
********	VEP02399A	P.C.BOARD W/COMPONENT			R2704	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
		REEL DRIVE			R2705	ERJ6GEYJ123	M.RESISTOR CH1/16W 12K	1	
			-		R2706 R2707,08	ERJ6GEYJ223 ERJ6GEYJ103	M.RESISTOR CH1/16W 22K M.RESISTOR CH1/16W 10K	2	
					R2709	ERJ6GEYJ105	M.RESISTOR CH1/16W 1M	1	
					R2710	ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1	
	V				R2711 R2712	ERJ6GEYJ103 ERJ6GEYJ102	M.RESISTOR CH1/16W 10K M.RESISTOR CH1/16W 1K	1	
					R2713,14	ERDS2TJ330	C.RESISTOR 1/4W 33	2	
2701	ECOD1U1021E	CAPACITORS FOR A CAPACITOR	ļ.,		R2715	ERX12SJ1R0	M.RESISTOR 1/2W 1.0	1	
2702	ECQB1H103JF ECEA1EKA470	P.CAPACITOR 50V 0.01U E.CAPACITOR 25V 47U	1		R2716 R2717	ERDS2TJ330 ERJ6GEYJ101	C.RESISTOR 1/4W 33 M.RESISTOR CH1/16W 100	1	
2703	ECEAOJKA470	E.CAPACITOR 6.3V 47U	1		R2718	ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1	
22704 22705	ECUM1H333KBN ECQV1H564JZ	P.CAPACITOR CH 50V 0.033U P.CAPACITOR 50V 0.56U	1		R2719 R2720	ERJ6GEYJ822 ERJ6GEYJ221	M.RESISTOR CH1/16W 8.2K	1	
2706-08	ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	3		R2721	ERJ6GEYJ102	M.RESISTOR CH1/16W 220 M.RESISTOR CH1/16W 1K	1	
2709-12	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4		R2722,23	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	2	
2713	ECEAOJKA470 ECEAOJKA101	E.CAPACITOR 6.3V 47U E.CAPACITOR 6.3V 100U	1		R2724 R2725,26	ERJ6GEYJ224 ERJ6GEYJ102	M.RESISTOR CH1/16W 220K M.RESISTOR CH1/16W 1K	2	
2715-17	ECEAOJKA470	E.CAPACITOR 6.3V 47U	3		R2727	ERJ6GEYJ681	M.RESISTOR CH1/16W 680	1	
2718	ECQ81H103JF	P.CAPACITOR 50V 0.01U E.CAPACITOR 25V 47U	1		R2728	ERJ6GEYJ823	M.RESISTOR CH1/16W 82K	1	
2720	ECEA1EKA470 ECEA0JKA470	E.CAPACITOR 25V 47U E.CAPACITOR 6.3V 47U	1		R2729,30 R2731	ERJ6GEYJ103 ERJ6GEYJ122	M.RESISTOR CH1/16W 10K M.RESISTOR CH1/16W 1.2K	1	
2721	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1		R2732	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
2722	ECQV1H564JZ ECEA1HKA2R2	P.CAPACITOR 50V 0.56U E.CAPACITOR 50V 2.2U	3		R2733 R2734,35	ERJ6GEYJ102 ERDS2TJ330	M.RESISTOR CH1/16W 1K C.RESISTOR 1/4W 33	1	
2726-29	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4		R2736	ERX12SJR47	C.RESISTOR 1/4W 33 M.RESISTOR 1/2W 0.47	1	
					R2737	ERDS2TJ330	C.RESISTOR 1/4W 33	1	
			-		R2738 R2739	ERJ6GEYJ102 ERJ6GEYJ221	M.RESISTOR CH1/16W 1K M.RESISTOR CH1/16W 220	1	
02701	MA151K	DIODE	1	<r></r>	R2740	ERJ6GEYJ224	M.RESISTOR CH1/16W 220K	1	
02702 02703	MA151WK	DIODE	1	<r></r>	R2741,42	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
02703	MA151K MA153	DIODE	1	<r></r>	R2743	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
2705	MA151K	DIODE	1	<r></r>					
02706 02707	MA151WK MA151K	DIODE	1	<r></r>	H03 00	ED Jeceryonon	M DECICION OF A Mari	_	
2708	MA151K MA153	DIODE	1	<r></r>	W93-99 W100-09	ERJ6GEYOROO ERJ6GEYOROO	M.RESISTOR CH 1/10W 0 M.RESISTOR CH 1/10W 0	7 10	
							0, 2,201		
								_	
C2701,02	XRA6435S	IC	2	<r></r>			MISCELLANEOUS	\vdash	
C2703	LM358PS-R	IC	1	<r></r>		VMX2183	P.C.B. SPACER	1	
C2704 C2705	MC14053BF LM339NS	IC IC	1	<r></r>				ļ	
C2706	LM358PS-R	IC	1	<r></r>				-	
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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description		Remarks
********	VEP03B32A	P.C.BOARD W/COMPONENT	-		C3076 C3077	ECEVOJV101	E.CAPACITOR 6.3V 100U	1	
-	VEPUSBSZA	VIDEO (1)	-		C3090	ECEV1HV010 ECEV0JV101	E.CAPACITOR 50V 1U E.CAPACITOR 6.3V 100U	1	
	VEPOOR78A	P.C.BOARD W/COMPONENT			C3091	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
		CCD PACK			C3092	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
	ļ				C3093	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
	ļ				C3094 C3095	ECUM1H12OJCN	C.CAPACITOR CH 50V 12P	1	
	1		\vdash		C3095	ECUM1H680JCN ECUM1H181JCN	C.CAPACITOR CH 50V 68P C.CAPACITOR CH 50V 180P	1	
			-		C3097	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
					C3098	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
					C3099	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
		CAPACITORS			C3100	ECEV1CV100	E.CAPACITOR 16V 10U	1	
1	ECEA1CKS100	E.CAPACITOR 16V 10U	1		C3101,02	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	2	
2	ECEM1H103ZFN ECEA1CKS100	C.CAPACITOR CH 50V 0.01U E.CAPACITOR 16V 10U	1		C3801 C3802	ECEVOJV470	C.CAPACITOR CH 50V 0.01U E.CAPACITOR 6.3V 47U	1	
4-C6	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3		C3803	ECUM1E683KBN	C.CAPACITOR CH 25V 0.068U	1	
7	ECEA1HKS4R7	E.CAPACITOR 50V 4.7U	1		C3804	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
3	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1		C3805,06	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
9	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C3808	ECUMIH331JCN	C.CAPACITOR CH 50V 330P	1	
10	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C3809	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
11	ECUMIHIOIJCN	C.CAPACITOR CH 50V 100P	1		C3810	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
12 3001	ECUM1H27OJCN	C.CAPACITOR CH 50V 27P C.CAPACITOR CH 50V 27P	1		C3812	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
3002	ECUM1H270JCN ECUM1H330JCN	C.CAPACITOR CH 50V 27P C.CAPACITOR CH 50V 33P	1		C3813 C3814	ECEV0JV101 ECEV1EV4R7	E.CAPACITOR 6.3V 100U	1	
3003	ECEV1HV4R7	E.CAPACITOR CH 50V 33P	1		C3814 C3817	ECUM1H104ZFN	E.CAPACITOR 25V 4.7U C.CAPACITOR CH 50V 0.1U	1	
3004,05	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2		C3818	ECUMIHIO42FN ECUMIHI51JCN	C.CAPACITOR CH 50V 0.10	1	
3006	ECUM1H39OJCN	C.CAPACITOR CH 50V 39P	1		C3819	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
3007	ECEV1CV470	E.CAPACITOR 16V 47U	1		C3820	ECEVOJV470	E.CAPACITOR 6.3V 47U	1	
3008	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C3821	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
3009	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1		C3824	ECEV1EV4R7	E.CAPACITOR 25V 4.7U	1	
3010	ECEV1EN4R7Q	E.CAPACITOR 25V 4.7U	1		C3830	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
3011,12	ECEVICV100	E.CAPACITOR 16V 10U	2		C3831	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
3013 3014	ECEV1CV220 ECEV1EV4R7	E.CAPACITOR 16V 22U E.CAPACITOR 25V 4.7U	1		C3832,33	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
3015	ECEVIEVAR/	E.CAPACITOR 25V 4.70 E.CAPACITOR 6.3V 100U	1		C3834 C3835	ECUM1H471JCN ECUM1H680JCN	C.CAPACITOR CH 50V 470P C.CAPACITOR CH 50V 68P	1	
3016	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C3837	ECUMINION ECUMINION	C.CAPACITOR CH 50V 100P	1	
3017	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1		C3838	ECUM1C474ZFN	C.CAPACITOR CH 16V 0.47U	1	
3018	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C3839,40	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
3020	ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1		C3841,42	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
3024	ECEVOJV101	E.CAPACITOR 6.3V 100U	1		C3843	ECEV1HVR47Q	E.CAPACITOR 50V 0.47U	1	
3025	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C3844	ECEV1HV010	E.CAPACITOR 50V 1U	1	
3026 3027	ECUM1H220JCN ECUM1H103ZFN	C.CAPACITOR CH 50V 22P C.CAPACITOR CH 50V 0.01U	1		C3845 C3847	ECEVOJV470	E.CAPACITOR 6.3V 47U	1	
3028	ECUM1H121JCN	C.CAPACITOR CH 50V 0.010	1		C3847	ECEV1CV470	C.CAPACITOR CH 50V 0.01U E.CAPACITOR 16V 47U	1	
3029,30	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2		C3850	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
3031	ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1			20012112012111	C.C. POLICK CIT SOV C.10	1	
3032	ECUM1H391JCN	C.CAPACITOR CH 50V 390P	1						
3033	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1						
3034	ECEV1HV010	E.CAPACITOR 50V 1U	1		D1	MA3091-M	DIODE	1	4₹>
3035,36	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2		03001,02	MA151K	DIODE	2	4₹>
3037 3038	ECEVOJV101 ECUM1H103ZFN	E.CAPACITOR 6.3V 100U C.CAPACITOR CH 50V 0.01U	1		D3005-08 D3801	MA151K	DIODE	4	∢ ?>
3039	ECUMINIOSZEN ECUMINIOSZEN	C.CAPACITOR CH 50V 0.010	1		D3801 D3802	MA153 MA151K	DIODE	1	∢> ∢>
3040	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1		D3002	LINTAIN	DIGUE	1	71.7
3041	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1			1			
3042	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1			1			
3043	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		DL 3801	VLD0147	DELAY	1	_
3047	ECEVOJV101	E.CAPACITOR 6.3V 100U	1		DL 3803	VLD0089	DELAY	1	
3048	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1						
3049 3050	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1			ļ			
051	ECUM1H080DCN ECUM1H681JCN	C.CAPACITOR CH 50V 8P C.CAPACITOR CH 50V 680P	1		FL3001	VLF0729	ETI TER		
3052	ECUMINISTOCK ECUMINISTOCK	C.CAPACITOR CH 50V 880P	1		FL3001 FL3002	VLF0/29 VLF0639	FILTER FILTER	1	
3053	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	7-4-7-	FL3003	ELB4M022	FILTER	1	
055-59	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	5		FL3004	ELB5A066	FILTER	1	
060	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1		FL3005	ELB4K114	FILTER	1	
061	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		FL3006	ELB4R031	FILTER	1	
3062,63	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2		FL3007	ELB4K114	FILTER	1	
3064	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1		FL3801	VLF0996	FILTER	1	
3065 3066	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		FL3802	VLF0299	FILTER	1	
3069-72	ECUM1H820JCN ECUM1H103ZFN	C.CAPACITOR CH 50V 82P C.CAPACITOR CH 50V 0.01U	4		FL3803	VLF0965	FILTER	1	
3073,74	ECEV1CV470	E.CAPACITOR 16V 47U	2		 	 			
		C.CAPACITOR CH 50V 0.01U			 				
1075	ECUM1H103ZFN	I C.CAPACITOR CHISOV 0.011	1			1			

Ref.No.	Part No.	Part Name & Description			Ref.No.	Part No.	Part Name & Description		<u></u>
C1	MSM6871RS	IC	1	<r></r>	Q3024	MSD601-R	TRANSISTOR	1	∢>
C1	M52370FP	IC	1	< ₹>	Q3801	MSC2295-B	TRANSISTOR	1	∢ R>
3002	VEFH20B	IC	1	<r></r>	Q3802	MSD601-R	TRANSISTOR	1	4₹>
3003	M52054FP	IC	1	<r></r>	Q3803	MSC2295-B	TRANSISTOR	1	4₹>
3004	UPC2405HF	IC	1	<r></r>	Q3804	MSB709-R	TRANSISTOR	1	4₹>
3005	AN6308S	IC D. C. DOADD	1	<r></r>	Q3805	MSC2295-B	TRANSISTOR	1	4₹>
3006	VEPOOR78A	P.C.BOARD W/COMPONENT	1	<r></r>	03806	MSB709-R	TRANSISTOR	1	₹>
			\vdash		03811	MSD601-R	TRANSISTOR	1	∢ ?>
			<u> </u>		Q3812	MSC2295-B	TRANSISTOR	1	∢ ?>
					Q3813	MSB709-R	TRANSISTOR	1	4₹>
					Q3814	MSD601-R	TRANSISTOR	1	4₹>
			_		Q3815	MSC2295-B	TRANSISTOR	1	4₹>
3801	VCR0380	IC	1	<r></r>	Q3816	MSD601-R	TRANSISTOR	1	∢ R>
C3804	TL8823F	IC	1	<r></r>	_			_	
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			<u> </u>					_	
			<u> </u>		QR3002-04	MRN1404	TRANSISTOR-RESISTOR	3	
1	VLQ0460	COIL	1		QR3005	MRN2404	TRANSISTOR-RESISTOR	1	< R>
3001	VLQ0163J121	COIL 120UH	1		QR3006,07	MRN1404	TRANSISTOR-RESISTOR	2	< ₹>
3002-04	VLQ0163J101	COIL 100UH	3		QR3009	MRN1403	TRANSISTOR-RESISTOR	1	⋖₹>
3005	VLQ0163J470	COIL 47UH	1		QR3011	MRN2404	TRANSISTOR-RESISTOR	1	∢>
3006	VLQ0319K220	COIL 22UH	1		QR3012,13	MRN1404	TRANSISTOR-RESISTOR	2	∢ >
3011,12	VLQ0163J220	COIL 22UH	2		QR3801	MRN1404	TRANSISTOR-RESISTOR	1	∢ R>
3013	VLQ0163J151	COIL 150UH	1		QR3803	MRN1404	TRANSISTOR-RESISTOR	1	< ₹ >
3014	VLQ0163J6R8	COIL 6.8UH	1					Ī	
3015	VLQ0163J4R7	COIL 4.7UH	1						
3016	VLQ0163J151	COIL 150UH	1			1		 -	†
3018	VLQ0163J181	COIL 180UH	1		1		RESISTORS		
3019	VLQ0163J270	COIL 27UH	1		R1	ERJ6GEYG151	M.RESISTOR CH1/16W 150	1	1
3020	VLQ0319K220	COIL 22UH	1		R2	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	†
3021	VLQ0163J5R6	COIL 5.6UH	1		R3	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
3022	VLQ0163J101	COIL 100UH	1	· · · · · · · · · · · · · · · · · · ·	R4,R5	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	2	
3023	VLQ0163J120	COIL 12UH	1		R6	ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1	
3025	VLQ0163J100	COIL 10UH	1		R7	ERJ6GEYJ183	M.RESISTOR CH1/16W 2.7K	1	
		<u> </u>			R8				
3026	VLQ0163J220	COIL 22UH	1			ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	1
3029	VLQ0163J100	COIL 10UH	1		R3001	ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	
3032	VLQ0163J560	COIL 56UH	1		R3002	ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	ļ
3033	VLQ0163J820	COIL 82UH	1		R3003	ERJ6GEYJ911	M.RESISTOR CH1/16W 910	1	ļ
3034,35	VLQ0163J151	COIL 150UH	2		R3004	ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1	
3036	VLQ0163J101	COIL 100UH	1		R3005	ERJ6GEYJ112	M.RESISTOR CH1/16W 1.1K	1	
3801	VLQ0133J821	COIL 820UH	1		R3006	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
3802	VLQ0163J151	COIL 150UH	1		R3007	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
3803	VLQ0133J391	COIL 390UH	1		R3008	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
3805	VLQ0163J220	COIL 22UH	1		R3010	ERJ6GEYJ273	M.RESISTOR CH1/16W 27K	1	
3806	VLQ0319K220	COIL 22UH	1		R3011	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
3808	VLQ0163J150	COIL 15UH	1		R3012	ERJ6GEYJ822	M.RESISTOR CH1/16W 8.2K	1	
3811,12	VLQ0163J150	COIL 15UH	2		R3013	ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K	1	
3813	VLQ0319K220	COIL 22UH	1		R3014	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
3815	VLQ0133J681	COIL 680UH	1		R3015	ERJ6GEYJ822	M.RESISTOR CH1/16W 8.2K	1	
3816	VLQ0319K220	COIL 22UH	1		R3016,17	ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	2	
					R3021	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
			T		R3023	ERJ6GEYJ102	M.RESISTOR CHI/16W 1K	1	
			T		R3027	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
i	VJR0231	CONNECTOR 6P	1		R3033	ERJ6GEYJ822	M.RESISTOR CH1/16W 8.2K	1	
3001	VJP3176B050	CONNECTOR (MALE)	1		R3034	ERJ6GEYJ123	M.RESISTOR CH1/16W 12K	1	·
3002	VJP3079	CONNECTOR (MALE)	1		R3035	ERJ6GEYOROO	M.RESISTOR CH 1/10W 0	1	
	1	The state of the s	 -		R3036	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
	<u> </u>		1	 	R3037	ERJ6GEYJ330	M.RESISTOR CH1/16W 33	1	
	-		-	 	R3038	ERJ6GEYJ272	M.RESISTOR CH1/16W 3.7K	1	
1-Q3	MSC2295-B	TRANSISTOR	3	<r></r>	R3039	ERJ6GEYJ332	+		
3001		· · · · · · · · · · · · · · · · · · ·	1	<r></r>		ERJ6GEYJ471		1	<u> </u>
3001	MSC2295-B	TRANSISTOR	↓ -		R3040		M.RESISTOR CH1/16W 470	1	
	MSD601-R	TRANSISTOR	1	<r></r>	R3041	ERJ6GEYJ391	M.RESISTOR CH1/16W 390	1	ļ
3003,04	MSC2295-B	TRANSISTOR	2		R3042	ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1	<u> </u>
3007	MSC2295-B	TRANSISTOR	1	<r></r>	R3043	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
3008,09	MSD601-R	TRANSISTOR	2		R3045	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
3010,11	MSC2295-8	TRANSISTOR	2		R3046	ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
3012	MSD601-R	TRANSISTOR	1	<r></r>	R3047	ERJ6GEYJ431	M.RESISTOR CH1/16W 430	1	ļ
3013	MSC2295-B	TRANSISTOR	1	<r></r>	R3048	ERJ6GEYG151	M.RESISTOR CH1/16W 150	1	
3014	MSB709-R	TRANSISTOR	1	<r></r>	R3049	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
3015	MSD601-R	TRANSISTOR	1	<r></r>	R3054	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
3016	MSC2295-B	TRANSISTOR	1	<r></r>	R3055	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
3017	MSD601-R	TRANSISTOR	1	<r></r>	R3058	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
7017		TRANSISTOR	1		R3059	ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	1
3018	2SD1330								
3018	MSD601-R	TRANSISTOR	1	<r></r>	R3060,61	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
		TRANSISTOR TRANSISTOR	-		R3060,61 R3062	ERJ6GEYJ102 ERJ6GEYJ561	M.RESISTOR CH1/16W 1K M.RESISTOR CH1/16W 560	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	D-	Dage de
R3063	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	I/Citid1K5	R3840			+-	Remarks
R3064	ERJ6GEYJ103	M.RESISTOR CH1/16W 1K	1		R3841	ERJ6GEYOROO ERJ6GEYJ393	M.RESISTOR CH 1/10W 0	1	
R3065	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	i		R3842	ERJ6GEYJ103	M.RESISTOR CH1/16W 39K M.RESISTOR CH1/16W 10K	1	
R3066	ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1		R3843	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3067	ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1		R3844	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	i	
R3068	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1		R3851	ERJ6GEYJ330	M.RESISTOR CH1/16W 33	1	
R3069	ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1		R3852	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R3070 R3071	ERJ6GEYJ681	M.RESISTOR CH1/16W 680 M.RESISTOR CH1/16W 10K	1		R3853	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3072,73	ERJ6GEYJ103 ERJ6GEYJ471	M.RESISTOR CH1/16W 10K M.RESISTOR CH1/16W 470	2		R3854,55	ERJ6GEYJ122 ERJ6GEYJ103	M.RESISTOR CH1/16W 1.2K	2	
R3075	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1		R3856,57 R3858,59	ERJ6GEYJ471	M.RESISTOR CH1/16W 10K M.RESISTOR CH1/16W 470	2	
R3076	ERJ6GEYJ123	M.RESISTOR CH1/16W 12K	1		R3860	ERJ6GEYJ681	M.RESISTOR CH1/16W 470	1	
R3077	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1		R3861-63	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	3	
R3078	ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1		R3864	ERJ6GEYJ470	M.RESISTOR CH1/16W 47	1	
R3079	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1		R3865	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R3080 R3081,82	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1		R3866,67	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
R3083	ERJ6GEYJ223 ERJ6GEYJ331	M.RESISTOR CH1/16W 22K M.RESISTOR CH1/16W 330	2		R3868	ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R3084	ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1		R3869 R3878,79	ERJ6GEYJ102 ERJ6GEYJ102	M.RESISTOR CH1/16W 1K M.RESISTOR CH1/16W 1K	1	ļ
R3085	ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1		R3880	ERJ6GEYJ223	M.RESISTOR CH1/16W 1K M.RESISTOR CH1/16W 22K	2	
R3086	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	i		1	LIGOOLIGES	MIRESISTOR CHITTOW ZZR		
R3087	ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1			 		-	
R3088	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1					\vdash	
R3089	ERJ6GEYJ391	M.RESISTOR CH1/16W 390	1		VR3001	EVM7JGA00B13	V.RESISTOR	1	
R3090	ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1		VR3002	EVM7DGA00B52	V.RESISTOR 500	1	
R3091 R3092	ERJ6GEYJ102 ERJ6GEYJ152	M.RESISTOR CH1/16W 1K	1		VR3003	EVM7DGA00B53	V.RESISTOR 5K	1	
R3092	ERJ6GEY0R00	M.RESISTOR CH1/16W 1.5K M.RESISTOR CH 1/10W 0	1		VR3004 VR3005	EVM7DGA00B14	V.RESISTOR 10K	1	
R3094	ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1		VR3005 VR3006	EVM7JGA00B24 EVM7DGA00B54	V.RESISTOR V.RESISTOR	1	
R3103	ERJ6GEYJ271	M.RESISTOR CH1/16W 270	1		VR3007	EVM7JGA00B14	V.RESISTOR	1	
R3104	ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1		VR3008	EVM70GA00B13	V.RESISTOR 1K	1	
R3105	ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1		VR3009	EVM7DGA00B52	V.RESISTOR 500	1	
R3106 '	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1		VR3803	EVM7JGA00B13	V.RESISTOR	1	
R3107	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1		VR3806	EVM7JGA00B13	V.RESISTOR	1	
R3108 R3109	ERJ6GEYJ162	M.RESISTOR CH1/16W 1.6K	1						
R3110	ERJ6GEYJ681 ERJ6GEYJ221	M.RESISTOR CH1/16W 680 M.RESISTOR CH1/16W 220	1		 			<u> </u>	
R3113	ERJ6GEY0R00	M.RESISTOR CH1/16W 220 M.RESISTOR CH 1/10W 0	1		X1	VCVO216	COVETAL OCCUL ATOD	<u> </u>	- <u>-</u>
R3115,16	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2		X3801	VSX0316 VSX0162	CRYSTAL OSCILLATOR CRYSTAL OSCILLATOR	1	<r> <r></r></r>
R3117	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1		13001	VONOTOE	CRISTAL USCILLATOR		412
R3118,19	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	2						
R3120	ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1					_	
R3121	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1				MISCELLANEOUS		
R3122	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1			VMZ2245	INSULATION SHEET	1	
R3123 R3124	ERJ6GEYJ561 ERJ6GEYJ102	M.RESISTOR CH1/16W 560 M.RESISTOR CH1/16W 1K	1	701		VHN0030	RIVET	3	
R3125	ERJ6GEYJ222	M.RESISTOR CH1/16W 1K M.RESISTOR CH1/16W 2.2K	1		ļ				
R3126	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1						
R3127	ERJ6GEYJ273	M.RESISTOR CH1/16W 27K	1		l				
R3128	ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1			1			
R3129	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1			VEP03B33A	P.C.BOARD W/COMPONENT		
R3130	ERJ6GEYJ681	M.RESISTOR CH1/16W 680	1				VIDEO (2)		
R3131-33 R3134	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	3	· · · · · · · · · · · · · · · · · · ·					
R3134 R3801	ERJ6GEY0R00 ERJ6GEYJ102	M.RESISTOR CH 1/10W 0 M.RESISTOR CH1/16W 1K	1						
R3802	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1		 	 			
R3804	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1		 				
R3805	ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1		-	1			
R3806	ERJ6GEYJ822	M.RESISTOR CH1/16W 8.2K	1						
R3807	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1				CAPACITORS		
R3808	ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1		C3301	ECEVOJV470	E.CAPACITOR 6.3V 47U	ī	
R3809	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1		C3302	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
R3810 R3811	ERJ6GEYG151 ERJ6GEYJ102	M.RESISTOR CH1/16W 150 M.RESISTOR CH1/16W 1K	1		C3303	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
R3812,13	ERJ6GEYJ102 ERJ6GEYJ223	M.RESISTOR CH1/16W 1K M.RESISTOR CH1/16W 22K	2		C3304,05 C3306	ECUM1H12OJCN	C.CAPACITOR CH 50V 12P	2	
R3814, 15	ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	2		C3307	ECEV1HVR22Q ECUM1H270JCN	C CAPACITOR CH 50V 0.22U	1	
R3816, 17	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2		C3308	ECUM1HOSODON	C.CAPACITOR CH 50V 27P C.CAPACITOR CH 50V 8P	1	
R3818	ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1		C3309		C.CAPACITOR CH 50V 0.01U	1	
R3819	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1		C3310	ECEVOJV101	E.CAPACITOR 6.3V 100U	1	
R3820,21	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	2		C3311	ECEV1HV4R7	E.CAPACITOR 50V 4.7U	1	
R3822-26	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	5		C3312		C.CAPACITOR CH 25V 0.068U	1	
R3828 R3830	ERJ6GE 102	M. RESISTOR CH1/16W 1K	1		C3313	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
R3831	ERJ6GEYJ102 ERJ6GEYJ271	M.RESISTOR CH1/16W 1K M.RESISTOR CH1/16W 270	1		C3314		C.CAPACITOR CH 50V 560P	1	
	ENGOGE I DE/ I				C3315		C.CAPACITOR CH 50V 0.01U	1	
R3837	ERJ6GEYJ561	IM.RESISTOR CH1/16₩ 560 I	1 1						
	ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1		C3316	ECUM1C105KBM	C.CAPACITOR CH 16V 1U	1	

Ref.No.	Part No.	Part Name & Description		Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3317	ECEV1EV330	E.CAPACITOR 25V 33U	1		FL3303	VLD0129	FILTER	1	
C3318 C3319	ECUM1H392KBN	C.CAPACITOR CH 50V 3900P C.CAPACITOR CH 50V 1500P	1					<u> </u>	
3320	ECEV1HVR47Q	C.CAPACITOR CH 50V 1500P E.CAPACITOR 50V 0.47U	1		 			-	
3321	ECEV1HVR22Q	E.CAPACITOR 50V 0.22U	1		IC3301	M50458-001FP	IC	1	∢>
C3322	ECUM1H821JCN	C.CAPACITOR CH 50V 820P	1		IC3302	MN1382-R	IC	1	₹>
C3323	ECEV1HN4R7S	E.CAPACITOR 50V 4.7U	1		IC3303	AN3296S	IC	1	∢ R>
C3324	ECEV1HN010	E.CAPACITOR 50V 1U	1		IC3304	M52065FP	IC	1	∢ ?
C3325,26	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2		IC3305	AN3581S	IC	1	∢ ?
C3327	ECEVOJV101	E.CAPACITOR 6.3V 100U	1		1C3306	M52350FP	IC	1	≪ >
C3328 C3329	ECEV1CV470	C.CAPACITOR CH 50V 0.01U E.CAPACITOR 16V 47U	1		IC3308	UPC2405HF UPC78L05J	IC IC	1	∢ >
C3330	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		IC3310	NJM2233BMA	IC	1	∢ >
C3332	ECEV1HV4R7	E.CAPACITOR 50V 4.7U	1		1 23310	HOULESSON			
C3333	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1					-	
C3334	ECEVOJV101	E.CAPACITOR 6.3V 100U	1						
C3335	ECEVOJV470	E.CAPACITOR 6.3V 47U	1		L3301,02	VLQ0163J220	COIL 22UH	2	
C3336	ECEV1CV470	E.CAPACITOR 16V 47U	1		L3303	VLQ0163J150	COIL 15UH	1	
C3337,38	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2		L3305-07	VLQ0163J220	COIL 22UH	3	
C3339 C3340,41	ECEVOJV101	E.CAPACITOR 6.3V 100U	1		L3308	VLQ0319K220	COIL 22UH	1	
C3340,41	ECEV1EN4R7Q	C.CAPACITOR CH 50V 0.01U E.CAPACITOR 25V 4.7U	2		L3312-14	VLQ0163J220	COIL 22UH	3	
C3342,43	ECEVIENAR/Q ECEVIEVAR/	E.CAPACITOR 25V 4.7U	1			1			
C3345	ECEVOJV470	E.CAPACITOR 6.3V 47U	1	<u> </u>		 		-	
C3346	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		P3301	VJP3176B050	CONNECTOR (MALE)	1	
C3347	ECEVOJV101	E.CAPACITOR 6.3V 100U	1				,,	Ī	
C3348	ECEVOGV221	E.CAPACITOR 4V 220U	1						
C3349	ECEV1CV100	E.CAPACITOR 16V 10U	1						
C3350	ECEVOGV221	E.CAPACITOR 4V 220U	1		Q3301	MSB709-R	TRANSISTOR	1	∢ >
C3351 C3352,53	ECEV1CV100 ECUM1H103ZFN	E.CAPACITOR 16V 10U C.CAPACITOR CH 50V 0.01U	2		03302-05	MSD601-R	TRANSISTOR	4	∢ ?>
C3352,53	ECEVOJV101	E.CAPACITOR 6.3V 100U	1		Q3306 Q3307,08	2SA1022-B MSC2295-B	TRANSISTOR TRANSISTOR	2	∢ >
C3355	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		Q3309	2SA1022-B	TRANSISTOR	1	< ₹ >
C3356	ECEVOJV101	E.CAPACITOR 6.3V 100U	1		Q3310,11	MSD601-R	TRANSISTOR	2	4R>
C3357	ECEV1HV010	E.CAPACITOR 50V 1U	1		Q3312	MSB709-R	TRANSISTOR	1	
C3358	ECUM1C334KBM	C.CAPACITOR CH 16V 0.33U	1		Q3313-15	MSD601-R	TRANSISTOR	3	∢ R>
C3359,60	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2		Q3316	MSB709-R	TRANSISTOR	1	∢ >
C3361	ECUM1C334KBM	C.CAPACITOR CH 16V 0.33U	1		Q3319	MSD601-R	TRANSISTOR	1	∢>
C3362-65	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	4		Q3321	MSD601-R	TRANSISTOR	1	∢ >
C3366 C3367	ECUM1H103ZFN ECEV1HN010	C.CAPACITOR CH 50V 0.01U E.CAPACITOR 50V 1U	1		Q3322 Q3323	MSC2295-B	TRANSISTOR	1	4₹>
C3368	ECUM1H153KBN	C.CAPACITOR CH 50V 0.015U	1		Q3323 Q3324	MSD601-R MSC2295-B	TRANSISTOR TRANSISTOR	1	∢ R>
C3369	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1		Q3325,26	MSD601-R	TRANSISTOR	2	< ₹ >
C3370	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1		03328	MSD601-R	TRANSISTOR	1	
C3371-75	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	5					i	
C3378-80	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3					_	
C3381	ECUM1E273KBN	C.CAPACITOR CH 25V 0.027U	1						
C3382	ECUM1H27OJCN	C.CAPACITOR CH 50V 27P	1		QR3301-03	MRN1404	TRANSISTOR-RESISTOR	3	∢>
C3383,84 C3385	ECEVOJV101	C.CAPACITOR CH 50V 0.01U	2			 		L	
C3386-89	ECEVOSVIOI ECUMIHIO3ZFN	E.CAPACITOR 6.3V 100U C.CAPACITOR CH 50V 0.01U	4		 				
C3390	ECEVOJN470	E.CAPACITOR 6.3V 47U	1		i		RESISTORS	<u> </u>	
C3391	ECEVOJV470	E.CAPACITOR 6.3V 47U	1		R3301,02	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	2	
C3392	ECEV1HV4R7	E.CAPACITOR 50V 4.7U	1		R3303	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
C3395	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		R3304	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
C3396	ECEVOJV101	E.CAPACITOR 6.3V 100U	1		R3305	ERJ6GEYJ391	M.RESISTOR CH1/16W 390	1	
C3398	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1		R3306	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
C3399-01	ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	3		R3307	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
C3403,04	ECEVOGV221	E.CAPACITOR 4V 220U	2		R3308	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
C3405 C3407	ECEV1CV100	C.CAPACITOR CH 50V 0.01U E.CAPACITOR 16V 10U	1		R3309	ERJ6GEYJ684	M.RESISTOR CH1/16W 680K	1	
C3407	ECEVICATOR ECEAOTOR	E.CAPACITOR 16V 10U E.CAPACITOR 6.3V 100U	$\frac{1}{1}$		R3310 R3311	ERJ6GEYJ753 ERJ6GEYJ103	M.RESISTOR CH1/16W 75K M.RESISTOR CH1/16W 10K	1	
C3409	ECEVICV470	E.CAPACITOR 0.3V 1000	1		R3312	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
C3410	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		R3313	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
C3411	ECV1ZW40X60	V.CAPACITOR 20P	1		R3314	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
C3412	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		R3315	ERJ6GEYJ683	M.RESISTOR CH1/16W 68K	1	
			L		R3316	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
			_		R3317	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
D2201 04	MATERIE	DYODE	ļ. <u>.</u>	-0.	R3318	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	_1	
D3301-04	MA151K	DIODE	4	<r></r>	R3319	ERJ6GEYJ564	M.RESISTOR CH1/16W 560K	1	
	+				R3320 R3321	ERJ6GEYJ333 ERJ6GEYJ223	M.RESISTOR CH1/16W 33K	1	
	-		 		R3322,23	ERJ6GEYJ223 ERJ6GEYJ222	M.RESISTOR CH1/16W 22K M.RESISTOR CH1/16W 2.2K	1	
FL3301	VLF1024	FILTER	1		R3324	ERJ6GEYJ392	M.RESISTOR CH1/16W 2.2K M.RESISTOR CH1/16W 3.9K	2	
FL3302	ELB4Q072	FILTER	1		R3325	ERJ6GEYJ223	M.RESISTOR CH1/16W 3.9K	1	
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Ref.No.	Part No.	Part Name & Description	1	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3326 R3328	ERJ6GEYJ681 ERJ6GEYJ561	M.RESISTOR CH1/16W 680 M.RESISTOR CH1/16W 560	1		R3440	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
3329	ERJ6GEYJ122	M.RESISTOR CH1/16W 560 M.RESISTOR CH1/16W 1.2K	1		R3441	ERJ6GEYJ821	M.RESISTOR CH1/16W 820	1	
3330	ERJ6GEYJ561	M.RESISTOR CHI/16W 1.2K	1	 	l				
3331	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1					_	<u> </u>
13332	ERJ6GEYJ621	M.RESISTOR CH1/16W 620	1		VR3301	EVM7DGA00B15	V.RESISTOR 100K	1	
3333	ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1		VR3302,03	EVM7DGA00B54	V.RESISTOR	2	
3334,35	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2		VR3304	EVM7DGA00B13	V.RESISTOR 1K	1	
3336	ERJ6GEYJ563	M.RESISTOR CH1/16W 56K	1		VR3305	EVM7DGA00B52	V.RESISTOR 500	1	
3337	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1						
R3338 R3339-41	ERJ6GEYJ223 ERJ6GEYJ222	M.RESISTOR CH1/16W 22K	1						
3342	ERJ6GEYOROO	M.RESISTOR CH1/16W 2.2K	3		 				
13344	ERJ6GEYJ122	M.RESISTOR CH 1/10W 0 M.RESISTOR CH1/16W 1.2K	1		X3301	VSX0114	CRYSTAL OSCILLATOR	1	< R >
13345	ERJ6GEYJ102	M.RESISTOR CH1/16W 1.2K M.RESISTOR CH1/16W 1K	1		l	 			
13346	ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1						
3347,48	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2			 			
3349	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1		 -	·			
3351	ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1			VEP04432B	P.C.BOARD W/COMPONENT		
3352	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1		1	121077320	AUDIO		
13353	ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1			VEP04353B	P.C.BOARD W/COMPONENT		
3354	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1			1	FM AUDIO PACK		
3355	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1						
3356	ERJ6GEYJ101	M.RESISTOR CH1/16W 100	1						
3357 3358	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1						
3358	ERJ6GEYJ222 ERJ6GEYJ221	M.RESISTOR CH1/16W 2.2K M.RESISTOR CH1/16W 220	1						
3360.61	ERJ6GEYJ221 ERJ6GEYJ102		1						
3369	ERJ6GEYJ152	M.RESISTOR CH1/16W 1K M.RESISTOR CH1/16W 1.5K	2		C401 C0	FORMS	CAPACITORS		
3371	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1		C401,02 C405	ECEV1CAN4R7	E.CAPACITOR 16V 4.7U	2	
3372	ERJ6GEYJ132	M.RESISTOR CH1/16W 1.3K	1		C405	ECHU1C682JA ECUM1H102JN	P.CAPACITOR 0.68U	1	
3373	ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1		C406	ECHU1C223JA	P. CAPACITOR CH 50V 1000P	1	
3374	ERJ6GEYJ474	M.RESISTOR CH1/16W 470K	î		C408	ECEV1EA100	P.CAPACITOR 0.022U E.CAPACITOR 25V 10U	1	
3375	ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1		C409	ECHU1C223JA	P.CAPACITOR 25V 10U P.CAPACITOR 0.022U	1	
3376	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1		C410	ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
3377	ERJ6GEYJ224	M.RESISTOR CH1/16W 220K	1		C411	ECEV1CA470	E.CAPACITOR 16V 47U	1	
3378	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1		C412	ECHU1C103JA	P.CAPACITOR 0.01U	1	
3379	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1		C413	ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
3380	ERJ6GEYJ823	M.RESISTOR CH1/16W 82K	1		C414-16	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	3	
3381,82 3383	ERJ6GEYJ472 ERJ6GEYJ154	M.RESISTOR CH1/16W 4.7K	2		C417	ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
3384	ERJ6GEYJ683	M.RESISTOR CH1/16W 150K	1		C418	ECWV1E104JS	P.CAPACITOR 25V	1	
3385	ERJ6GEYJ682	M.RESISTOR CH1/16W 68K M.RESISTOR CH1/16W 6.8K	1		C419	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
3386	ERJ6GEYJ332	M.RESISTOR CH1/16W 6.8K M.RESISTOR CH1/16W 3.3K	1		C420	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
3388	ERJ6GEYJ153	M.RESISTOR CH1/16W 3.5K	1		C421-23	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
3389	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1		C424 C425	ECWV1E154JS ECWV1E104JS	P.CAPACITOR 25V	1	
3390	ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1		C426	ECUM1H331JCN	P.CAPACITOR 25V	1	
3391	ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1		C427	ECUM1H102JN	C.CAPACITOR CH 50V 330P C.CAPACITOR CH 50V 1000P	1	
3392	ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1		C428	FOURALLISAGRES		1	
3393	ERJ6GEYJ273	M.RESISTOR CH1/16W 27K	1		C431	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
3394	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1		C432	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
3398,99	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2		C433	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
3400	ERJ6GEYJ821	M.RESISTOR CH1/16W 820	1		C434	ECW1E104JS	P.CAPACITOR 25V	1	
3401	ERJ6GEYJ681	M.RESISTOR CH1/16W 680	1		C435	ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
3402 3403	ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1		C436-38	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	3	
3403	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1		C439	ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
3406	ERJ6GEYJ222 ERJ6GEYJ471	M.RESISTOR CH1/16W 2.2K M.RESISTOR CH1/16W 470	1		C440	ECHU1C103JA	P.CAPACITOR 0.01U	1	
3407	ERJ6GEYJ102		1		C441	ECEV1CA470	E.CAPACITOR 16V 47U	1	
3408	ERJ6GEYJ183	M.RESISTOR CH1/16W 1K M.RESISTOR CH1/16W 18K	1		C442	ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
3409	ERJ6GEYJ333	M.RESISTOR CHI/16W 13K	1		C443	ECHU1C223JA	P.CAPACITOR 0.022U	1	
411	ERJ6GEYJ393	M.RESISTOR CH1/16W 39K	1		C444 C445	ECEV1EA100 ECUM1H102JN	E.CAPACITOR 25V 10U	1	
412	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1		C446	ECHU1C223JA	C.CAPACITOR CH 50V 1000P P.CAPACITOR 0.022U	1	
413	ERJ6GEYJ105	M.RESISTOR CH1/16W 1M	1		C447	ECHU1C682JA	P.CAPACITOR 0.022U P.CAPACITOR 0.68U	1	
414	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1		C449	ECEV1HA010	E.CAPACITOR 50V 1U	1	
416	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1		C450-52	ECEV1HA3R3	E.CAPACITOR 50V 3.3U	3	
423	ERJ6GEYJ330	M.RESISTOR CH1/16W 33	1		C453,54	ECEV1CA100	E.CAPACITOR 16V 10U	2	
H25	ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1		C455	ECEV1CA470	E.CAPACITOR 16V 47U	1	
426	ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K	1		C456	ECEV1HA010	E.CAPACITOR 50V 1U	1	
428-30	ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	3		C457	ECEV1CA220	E.CAPACITOR 16V 22U	1	-
432 433	ERJ6GEYJ333	M. RESISTOR CH1/16W 33K	1		C458	CUMINIO3ZFN	C.CAPACITOR CH 50V 0.01U	1	-
433 435-37	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1		C459,60	ECEVOJA470	E.CAPACITOR 6.3V 47U	2	
438	ERJ6GEYJ750 ERJ6GEYOROO	M.RESISTOR CH1/16W 75	3		C461,62		E.CAPACITOR 50V 1U	2	
439	ERJ6GEYJ223	M.RESISTOR CH 1/10W 0	+		C463		P.CAPACITOR 25V	1	
	ENUVUE I UCCO	M.RESISTOR CH1/16W 22K	1		C4001-03	ECEV1CV100	E.CAPACITOR 16V 10U	3	
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Ref.No.	Part No.	Part Name & Description	\vdash	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4004	ECUX1C104ZFV	C.CAPACITOR 16V	1		C4524	ECUX1H103ZFV	C.CAPACITOR 50V	1	
4005	ECEA1CU471	E.CAPACITOR 16V 470U	1		C4525-27	ECST1CC106Z	T.CAPACITOR 16V	3	
4006	ECEV1CV470 ECEV0JV101	E.CAPACITOR 16V 47U E.CAPACITOR 6.3V 100U	1		C4528	ECUX1H103ZFV	C.CAPACITOR 50V	1	
4008	ECEVITATOR	E.CAPACITOR 6.3V 100U E.CAPACITOR 50V 1U	1		C4529	ECST1CC106Z	T.CAPACITOR 16V	1	ļ
4009,10	ECEVICVIOO	E.CAPACITOR 16V 10U	2		C4530	ECUX1H103ZFV	C.CAPACITOR 50V	1	
4011	ECEV1HV010	E.CAPACITOR 50V 1U	1		C4531,32 C4533,34	ECEVICVIOO	E.CAPACITOR 16V 10U	2	
4027	ECEV1EV330	E.CAPACITOR 25V 33U	1		C4535, 34 C4535	ECUX1C104ZFV ECST1CC106Z	C.CAPACITOR 16V	2	
4028	ECEVICV470	E.CAPACITOR 16V 47U	1		C4535-38	ECEVICVIOO2	T.CAPACITOR 16V E.CAPACITOR 16V 10U	1	
4029	ECEV1HV010	E.CAPACITOR 50V 1U	1		C4539	ECST1CC106Z	E.CAPACITOR 16V 10U T.CAPACITOR 16V	1	
4030	ECHU1C183JA	P.CAPACITOR 0.018U	1		C4539	ECEVICVIOO	E.CAPACITOR 16V 10U	+	
1031	ECEV1CV100	E.CAPACITOR 16V 10U	1		C4541	ECUX1H103ZFV	C.CAPACITOR 50V	1	
1032	ECHU1C183JA	P.CAPACITOR 0.018U	1		C4543	ECEVICV470	E.CAPACITOR 16V 47U	1	
1033,34	ECHU1C472JA	P.CAPACITOR 0.47U	2		V-3-3	ECEVICA4/0	E.CAPACITOR 16V 4/0	1	
4035	ECHU1C104J	P.CAPACITOR 0.001U	1		{ 	 		-	
4036	ECEV1CV470	E.CAPACITOR 16V 47U	1		 	-		-	
4037	ECEV1HV010	E.CAPACITOR 50V 1U	1		D401	MA720	DIODE	1	∢ R>
1038	ECST1CC106Z	T.CAPACITOR 16V	1		D4001	MA3056-M	DIODE	1	
1039	ECEVOJV101	E.CAPACITOR 6.3V 100U	1		04002	MA151K	DIODE	+	
1040	ECHU1C223JA	P.CAPACITOR 0.022U	1		D4002 D4005,06	MA151K	DIODE	2	
1041	ECHU1C182JA	P.CAPACITOR 0.18U	1		D4003,00 D4007	MA151WK	DIODE	1	₹>
1042	ECHU1C153JA	P.CAPACITOR 0.015U	1		D4007	MA151WA	DIODE	1	< ₹>
1043	ECEV1CV470	E.CAPACITOR 16V 47U	1		D4008	MA151K	DIODE	2	< ₹>
1044	ECEVIEV330	E.CAPACITOR 25V 33U	1		D4501	MA153	DIODE	1	<
1045	ECEVICV470	E.CAPACITOR 16V 47U	1		1	111133	DIVIDE	1	77.
4046	ECEV1HV010	E.CAPACITOR 50V 1U	1		┧├─ ┈──┼	-		-	
4047,48	ECHU1C183JA	P.CAPACITOR 0.018U	2		<u> </u>	 			-
1049	ECEVICVI00	E.CAPACITOR 16V 10U	1		FL4001,02	VLF0402	FILTER	2	
4050	ECHU1C104J	P.CAPACITOR 0.001U	1		FL4501,02	VLF0402 VLF0697	FILTER	1	
1051	ECEV1CV100	E.CAPACITOR 16V 10U	1		1	12,009/	, ILILA	1	
1052	ECEV1CV470	E.CAPACITOR 16V 47U	1		1 	+			
1053	ECST1CC106Z	T.CAPACITOR 16V	1		┧┝ ─────	-		-	
1054	ECEV1CV470	E.CAPACITOR 16V 47U	1		IC401	BA7705K1	IC	├ -	< R>
055	ECEV1HV010	E.CAPACITOR 50V 1U	1		IC4001	M52055FP	IC	$\frac{1}{1}$	
056	ECHU1C103JA	P.CAPACITOR 0.01U	1		IC4002,03	LA7296	IC	_	∢ >
1057	ECEVOJV101	E.CAPACITOR 6.3V 100U	1		IC4006	NJM4558M	IC	2	∢ >
1058	ECHU1C223JA	P.CAPACITOR 0.022U	1		IC4501	MC14053BF	IC	1	∢>
1059	ECHU1C182JA	P.CAPACITOR 0.18U	1		IC4502,03	NJM4558M	IC	1	< ₹>
1060	ECHU1C153JA	P.CAPACITOR 0.015U	1		IC4502,03	UPC78N05H	IC	2	∢ >
1061	ECEV1CV470	E.CAPACITOR 16V 47U	1		IC4505	VEP04353B		1	∢ ?>
1062-67	ECST1CC106Z	T.CAPACITOR 16V	6		104505	VEPU4333B	P.C.BOARD W/COMPONENT	1	∢ R>
4068	ECEV1CV470	E.CAPACITOR 16V 47U	1		11	+			
1069	ECEV1CV100	E.CAPACITOR 16V 10U	1		 	 		 	
1070	ECEV1HNR47Q	E.CAPACITOR 50V 0.47U	1		1	 			
1071	ECEV1CV100	E.CAPACITOR 16V 10U	1		1	+		\vdash	
1072	ECQB1H332JF	P.CAPACITOR 50V 3300P	1		IC4506	AN3912	IC	١,	40.
1073	ECQB1H682JF	P.CAPACITOR 50V 6800P	1		IC4507	MC14053BF	IC	1	< ₹>
1074	ECQF6182KZ	P.CAPACITOR	1		IC4508	NJM4558M	IC	1	< ₹>
075,76	ECCD2H151J	C.CAPACITOR 500V 150P	2		IC4509	NJM4565MD	IC		t <u> </u>
077-80	ECQB1H473JF	P.CAPACITOR 50V 0.047U	4		IC4509	BA6138	IC		<
081	ECHU1C103JA	P.CAPACITOR 0.01U	1		IC4511	MC14066BF	IC	1	₹>
082	ECUX1H103ZFV	C.CAPACITOR 50V	1		1	101-10000		1	∢ R>
083	ECEV1CV470	E.CAPACITOR 16V 47U	1		11			-	
084,85	ECST1CC106Z	T.CAPACITOR 16V	2		11	 			
086	ECEV1CV470	E.CAPACITOR 16V 47U	1		L401	VLQ0163J101	COIL 100UH		
087,88	ECEVICVI00	E.CAPACITOR 16V 10U	2		1403	VLQ0163J101 VLQ0163J101		1	
089,90	ECEV1EV4R7	E.CAPACITOR 25V 4.7U	2		L4001	VLQEL07F153J	COIL 100UH	1	
501-03	ECUX1H103ZFV	C.CAPACITOR 50V	3		L4001	VLQEL07F153J		1	
504	ECEV1CV470	E.CAPACITOR 16V 47U	1		14007	VLQ24F102K25	COIL 15UH	1	ļ
505	ECUX1H103ZFV	C.CAPACITOR 50V	1		L4501	VLQ24F102K25 VLQ0163J101	COIL 1000H	1	
506	ECEV1CV470	E.CAPACITOR 16V 47U	1		1	15401030101	1000H	1	
507	ECUX1H103ZFV	C.CAPACITOR 50V	1		11	 		 	
508,09	ECST1CC106Z	T.CAPACITOR 16V	2		1	 			
510	ECEV1CV220	E.CAPACITOR 16V 22U	1		P1,P2	VJR0797	CONNECTOR	2	
511	ECEV1CV470	E.CAPACITOR 16V 47U	1		P4001	VJP1230R	CONNECTOR (MALE)	1	
512	ECEVOJV101	E.CAPACITOR 6.3V 100U	1		P4002	VJP1230T	CONNECTOR (MALE)	1	
513	ECUX1H103ZFV	C.CAPACITOR 50V	1		P4003	VJP1231T	CONNECTOR (MALE)		
515,16	ECEV1HV010	E.CAPACITOR 50V 1U	2		P4501	VJP3176B050	CONNECTOR (MALE)	1	
517	ECEVOJV101	E.CAPACITOR 6.3V 100U	1		P4501 P4502	VJP3079		1	
518	ECEVICV470	E.CAPACITOR 0.3V 1000	+		14302	49520/A	CONNECTOR (MALE)	1	
519	ECQB1H823JF		1		┧ ├───┼			<u> </u>	
520		P.CAPACITOR 50V 0.082U	1		┨├── ── 	 		<u> </u>	
521	ECUX1H103ZFV	C.CAPACITOR 50V	1		han: no	000-000		_	<u> </u>
521	ECEV1EV330	E.CAPACITOR 25V 33U	1		Q401,02	2SD1328-R	TRANSISTOR	2	∢ ?>
523	ECUX1H103ZFV	C.CAPACITOR 50V	1	ļ	Q4001	MSD602-R	TRANSISTOR	1	< ₹ >
J43	ECST1CC106Z	T.CAPACITOR 16V	1		04007,08	MSD601-R	TRANSISTOR	2	≪>
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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description Pcs Remarks
Q4009,10	2SB792-R	TRANSISTOR	2		R441	ERJ6GEYJ223	
Q4011	MSB710-R	TRANSISTOR	1		R442,43	ERJ6GEYJ182	
04012	2SD973A-R	TRANSISTOR	1	<r></r>	R4001-03	ERJ3GEYJ104	M.RESISTOR CH1/16W 1.8K 2
Q4013,14	2SB710A-R	TRANSISTOR	2		R4004	ERJ3GEYJ104	M.RESISTOR CH 3W 100K 3
Q4015-18	2SD814-R	TRANSISTOR	4	<r></r>	R4005		M.RESISTOR CH 3W 10K 1
04019-22	2SD1938	TRANSISTOR	4	<r></r>	R4006,07	ERJ3GEYJ821 ERJ3GEYJ682	M.RESISTOR CH 3W 820 1
04501	MSB710-R	TRANSISTOR	1	<r></r>	R4008,09		M.RESISTOR CH 3W 6.8K 2
Q4502	MSB709-R	TRANSISTOR	1		R4019,20	ERJ3GEYG123	M.RESISTOR CH 3W 12K 2
Q4503	MSD602-R	TRANSISTOR	1	<r></r>		ERJ3GEYJ103	M.RESISTOR CH 3W 10K 2
Q4504,05	MSD601-R	TRANSISTOR	2	<r></r>	R4051	ERJ3GEYJ104	M.RESISTOR CH 3W 100K 1
Q4506-10	2SD1328-R	TRANSISTOR	5	<r></r>	R4052	VRE0034E123	M.RESISTOR CH 1/10W 12K 1
3	EGDIOCO II	TOVISION.	-3	- N	R4053	ERJ3GEYJ101	M.RESISTOR CH 3W 100 1
	 		-		R4054	ERJ3GEYJ181	M.RESISTOR CH 3W 180 1
	+		├		R4055	ERJ3GEYG222	M.RESISTOR CH 3W 2.2K 1
QR401	UN2113	TRANSISTOR-RESISTOR		-0>	R4056,57	ERJ3GEYJ103	M.RESISTOR CH 3W 10K 2
QR403	UN2213	TRANSISTOR-RESISTOR	1	<r> <r></r></r>	R4058	ERJ3GEYJ564	M.RESISTOR CH 3W 560K 1
QR404	UN2113	TRANSISTOR-RESISTOR	1		R4059	ERJ3GEYG331	M.RESISTOR CH 3W 330 1
QR4001,02	UN5113		1	<r></r>	R4060	ERJ3GEYJ683	M.RESISTOR CH 3W 68K 1
QR4003	UN5211	TRANSISTOR-RESISTOR	2	<r></r>	R4061	ERJ3GEYJ334	M.RESISTOR CH 3W 330K 1
QR4004	UN5113	TRANSISTOR-RESISTOR	1	<r></r>	R4062	ERJ3GEYJ683	M.RESISTOR CH 3W 68K 1
QR4005	UN5211	TRANSISTOR-RESISTOR	1	<r></r>	R4063	ERJ3GEYJ121	M.RESISTOR CH 3W 120 1
QR4005	UN5211	TRANSISTOR-RESISTOR	1	<r></r>	R4064	ERJ3GEYJ104	M.RESISTOR CH 3W 100K 1
QR4005	UN5113 UN5213	TRANSISTOR-RESISTOR	1	<r></r>	R4065	VRE0034E123	M.RESISTOR CH 1/10W 12K 1
QR4015	UN5213	TRANSISTOR-RESISTOR	1	<r></r>	R4066	ERJ3GEYJ101	M.RESISTOR CH 3W 100 1
QR4017,18	UN5215 UN5213	TRANSISTOR-RESISTOR	1	<r></r>	R4067	ERJ3GEYJ181	M.RESISTOR CH 3W 180 1
		TRANSISTOR-RESISTOR	2	<r></r>	R4068	ERJ3GEYG222	M.RESISTOR CH 3W 2.2K 1
QR4019 QR4020	UN5215	TRANSISTOR-RESISTOR	1	<r></r>	R4069,70	ERJ3GEYJ103	M.RESISTOR CH 3W 10K 2
QR4020 QR4021-24	UN5213	TRANSISTOR-RESISTOR	1	<r></r>	R4071	ERJ3GEYJ564	M.RESISTOR CH 3W 560K 1
QR4021-24 QR4025	UN5215	TRANSISTOR-RESISTOR	4	<r></r>	R4072	ERJ3GEYG331	M.RESISTOR CH 3W 330 1
QR4025,27	MRN1402	TRANSISTOR-RESISTOR	1	<r></r>	R4073	ERJ3GEYJ683	M.RESISTOR CH 3W 68K 1
OR4028.29	MRN1403	TRANSISTOR-RESISTOR	2	<r></r>	R4074	ERJ3GEYJ334	M.RESISTOR CH 3W 330K 1
	UN5113	TRANSISTOR-RESISTOR	2	<r></r>	R4075	ERJ3GEYJ121	M.RESISTOR CH 3W 120 1
QR4030	UN5212	TRANSISTOR-RESISTOR	1	<r></r>	R4076	ERJ3GEYJ683	M.RESISTOR CH 3W 68K 1
QR4031,32	UN5213	TRANSISTOR-RESISTOR	2	<r></r>	R4077	ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K 1
QR4501	UN5213	TRANSISTOR-RESISTOR	1	<r></r>	R4078	ERJ3GEYJ102	M.RESISTOR CH 3W 1K 1
QR4502	UN5212	TRANSISTOR-RESISTOR	1	<r></r>	R4079	ERJ3GEYJ183	M.RESISTOR CH 3W 18K 1
QR4503	UN5211	TRANSISTOR-RESISTOR	1	<r></r>	R4080	ERJ3GEYJ513	M.RESISTOR CH 3W 51K 1
QR4504	XN1501	TRANSISTOR-RESISTOR	1	<r></r>	R4081	ERJ3GEYJ105	M.RESISTOR CH 3W 1M 1
QR4505,06	UN5213	TRANSISTOR-RESISTOR	2	<r></r>	R4082	ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K 1
					R4083	ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K 1
 					R4084	ERJ3GEYJ153	M.RESISTOR CH 3W 15K 1
					R4085	ERJ3GEYJ105	M.RESISTOR CH 3W 1M 1
		RESISTORS			R4086	ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K 1
R403,04	ERJ6GEYG821	M.RESISTOR CH1/16W 820	2		R4087	ERJ3GEYJ513	M.RESISTOR CH 3W 51K 1
R406	ERJ6GEYG681	M.RESISTOR CH1/16W 680	1		R4088	ERJ3GEYJ153	M.RESISTOR CH 3W 15K 1
R407	ERJ6GEYJ112	M.RESISTOR CH1/16W 1.1K	1		R4089	ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K 1
R408	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1		R4090	ERJ3GEYJ183	M.RESISTOR CH 3W 18K 1
R409	ERJ6GEYG183	M.RESISTOR CH1/16W 18K	1		R4091	ERJ3GEYJ102	M.RESISTOR CH 3W 1K 1
R410	ERJ6GEYG562	M.RESISTOR CH1/16W 5.6K	1		R4092	ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K 1
R411	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1		R4094-00	ERJ3GEYJ103	M.RESISTOR CH 3W 10K 7
R412	ERJ6GEYJ303	M.RESISTOR CH1/16W 30K	1		R4101	ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K 1
R413	ERJ6GEYJ822	M.RESISTOR CH1/16W 8.2K	1		R4102	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K 1
R414	ERJ6GEYJ105	M.RESISTOR CH1/16W 1M	1		R4103	ERJ6GEYJ183	M.RESISTOR CH1/16W 18K 1
R415	ERJ6GEYG163	M.RESISTOR CH1/16W 16K	1		R4104	ERDS2TJ4R7	C.RESISTOR 1/4W 4.7 1
R416	ERJ6GEYJ393	M.RESISTOR CH1/16W 39K	1		R4105	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K 1
R417	ERJ6GEYJ113	M.RESISTOR CH1/16W 11K	1		R4106	ERJ6GEYJ105	
R418	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1		R4107	ERJ6GEYJ473	
R420	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1		R4108	ERJ6GEYJ472	
R421	ERJ6GEYJ123	M.RESISTOR CH1/16W 12K	1		R4109	ERJ6GEYJ561	
R422	ERJ6GEYJ303	M.RESISTOR CH1/16W 30K	1		R4110	ERJ6GEYJ103	M.RESISTOR CH1/16W 560 1
R423	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	i		R4111	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K 1
R424	ERJ6GEYG562	M.RESISTOR CH1/16W 5.6K	1		R4112	ERJ6GEYJ473	M.RESISTOR CH1/16W 1K 1
R425	ERJ6GEYG183	M.RESISTOR CH1/16W 18K	1		R4113	ERJ6GEYJ103	M.RESISTOR CH1/16W 47K 1
R426	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1		R4114	ERJ6GEYJ472	M.RESISTOR CH1/16W 10K 1
R427	ERJ6GEYJ112	M.RESISTOR CH1/16W 1.1K	1		R4115	ERJ6GEYJ561	M.RESISTOR CH1/16W 4.7K 1
R428	ERJ6GEYG681	M.RESISTOR CH1/16W 680	1		R4116	ERJ6GEYJ105	M.RESISTOR CH1/16W 560 1
R429	ERJ6GEYG821	M.RESISTOR CH1/16W 820	1		R4116	ERJ6GEYJ105 ERJ6GEYJ332	M.RESISTOR CHI/16W 1M 1
R431	ERJ6GEYG821	M.RESISTOR CH1/16W 820	1		R4117~20		M.RESISTOR CH1/16W 3.3K 4
R433	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1			ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K 1
R434	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1		R4122	ERJ6GEYOROO	M.RESISTOR CH 1/10W 0 1
R435	ERJ6GEYJ102	M.RESISTOR CH1/16W 330	1		R4124	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K 1
R436	ERJ6GEYJ223		_		R4125	ERJ6GEYOROO	M.RESISTOR CH 1/10W 0 1
R437	ERJ6GEYJ331		1		R4127,28	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K 2
3438	ERJ6GEYJ102		1		R4130-34	ERJ3GEYJ103	M.RESISTOR CH 3W 10K 5
3439	ERJ6GEYJ223		1		R4135	ERJ3GEYJ392	M.RESISTOR CH 3W 3.9K 1
3440	ERJ6GEYJ225	M.RESISTOR CH1/16W 22K	1		R4136	ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K 1
	FUONDE LOCAD	M.RESISTOR CH1/16W 2.2M	1		R4137	ERJ3GEYJ392	M.RESISTOR CH 3W 3.9K 1
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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
138	ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1		VR4504	EVM7DGA00B24	V.RESISTOR 20K	1	
139,40	ERJ3GEYJ102	M.RESISTOR CH 3W 1K	2		VR4505,06	EVM7JGA00B53	V.RESISTOR	2	
1141,42	ERJ3GEYJ104	M.RESISTOR CH 3W 100K	2		VR4507	EVM7DGA00B25	V.RESISTOR 200K	1	
1501	ERJ3GEYG512	M.RESISTOR CH 3W 5.1K	1		L	<u>- </u>		\sqcup	
1502	ERJ3GEYJ104	M.RESISTOR CH 3W 100K M.RESISTOR CH 3W 10K	1	· · · · · · · · · · · · · · · · · · ·		 			
1503 1504	ERJ3GEYJ103 ERJ3GEYG512	M.RESISTOR CH 3W 5.1K	1				MISCELLANEOUS		
505-07	ERJ3GEYJ103	M.RESISTOR CH 3W 10K	3			VSC4001	SHIELD CASE (TOP)	1	
509	ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1			VSC4002	SHIELD CASE (MAIN)	1	
1510	ERJ3GEYJ822	M.RESISTOR CH 3W 8.2K	1			VSC4003	SHIELD CASE (BOTTOM)	1	
511,12	ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	2						
1513	ERJ3GEYJ822	M.RESISTOR CH 3W 8.2K	1		 				
1514	ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K	1		1				
\$515 \$516	ERJ3GEYJ104 ERJ3GEYJ563	M.RESISTOR CH 3W 100K M.RESISTOR CH 3W 56K	1					\vdash	
4517	ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1			VEP051621	P.C.BOARD W/COMPONENT	-	
4518	ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1				HEAD AMP		
4519,20	ERJ3GEYJ682	M.RESISTOR CH 3W 6.8K	2						
4521	ERJ3GEYJ822	M.RESISTOR CH 3W 8.2K	1				1 1		
4522	ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1						
4523	ERJ3GEYJ333	M.RESISTOR CH 3W 33K	1					<u> </u>	
4524,25	ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2			1			
4526 4527	ERJ3GEYJ681 ERJ3GEYJ102	M.RESISTOR CH 3W 680 M.RESISTOR CH 3W 1K	1		 				
4527 4528	ERJ3GEYJ102 ERJ3GEYJ182	M.RESISTOR CH 3W 1.8K	1				CAPACITORS		
4529,30	ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K	2		C5001	ECUMIH102KBN	C.CAPACITOR CH 50V 1000P	1	<u> </u>
4531	ERJ3GEYJ182	M.RESISTOR CH 3W 1.8K	1		C5002,03	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	,
4532	ERJ3GEYJ821	M.RESISTOR CH 3W 820	1		C5004	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
4533	ERJ3GEYJ182	M.RESISTOR CH 3W 1.8K	1		C5005	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
4534	ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1		C5006-08	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
4535	ERJ3GEYJ223	M.RESISTOR CH 3W 22K	1		C5009	ECUM1H182JN	C.CAPACITOR CH 50V 1800P	1	
4536,37	ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	2		C5010 C5011	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
4539 4540	ERJ3GEYJ223 ERJ3GEYJ103	M.RESISTOR CH 3W 22K M.RESISTOR CH 3W 10K	1		C5011	ECEA1CKA220 ECUM1H473ZFN	E.CAPACITOR 16V 22U C.CAPACITOR CH 50V 0.047U	1	
4541	ERJ3GEYJ223	M.RESISTOR CH 3W 22K	1		C5012	ECUM1H102KBN	C.CAPACITOR CH 50V 0.0478	1	
4542	ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1		C5014	ECEAOJKA470	E.CAPACITOR 6.3V 47U	1	
4543	ERJ3GEYJ330	M.RESISTOR CH 3W 33	1		C5015	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
4544	ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1		C5016	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
4545	ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	**************************************	C5017	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
4546	ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1		C5018,19	ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	2	
4547	ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1		C5020 C5021	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
4548 4549	ERJ3GEYJ561 ERJ3GEYJ103	M.RESISTOR CH 3W 560 M.RESISTOR CH 3W 10K	1		C5021	ECEA1EKA4R7	C.CAPACITOR CH 50V 8P E.CAPACITOR 25V 4.7U	1	
4550	ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1		C5022	ECUM1HO2ODCN	C.CAPACITOR CH 50V 2P	1	
4551	ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	*	C5024,25	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
4552-54	ERJ3GEYJ103	M.RESISTOR CH 3W 10K	3		C5026	ECUM1HO2ODCN	C.CAPACITOR CH 50V 2P	1	
4555-58	ERJ3GEYJ473	M.RESISTOR CH 3W 47K	4		C5027	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
4559-62	ERJ3GEYJ103	M.RESISTOR CH 3W 10K	4		C5028	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
4563,64	ERJ3GEYJ470	M.RESISTOR CH 3W 47	2		C5029	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
4566	ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1		C5030		C.CAPACITOR CH 50V 0.01U	1	
4567	ERJ3GEYJ181	M.RESISTOR CH 3W 180	1		C5031 C5032,33	ECUM1H104ZFN ECUM1E104ZFN	C.CAPACITOR CH 50V 0.1U C.CAPACITOR CH 25V 0.1U	2	ļ
			+		C5032,33	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
			+		C5035	ECEAOJKA470	E.CAPACITOR 6.3V 47U	1	
Y4001	VSY2067	RELAY	1		C5036	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
					C5037,38	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
					C5039,40	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
			_		C5042	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
4001	VLT0538	TRANSFORMER	1		C5043	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
	 	ļ	+		C5044,45 C5046	ECUM1H101JCN ECUM1H471JCN	C.CAPACITOR CH 50V 100P C.CAPACITOR CH 50V 470P	1	
			+		C5046	ECEA1HKA010	E.CAPACITOR CH SOV 470P	1	
R401	EVM7JGA00B24	V.RESISTOR 20K	1		C5048	ECUM1H472ZFN	C.CAPACITOR CH 50V 4700P	1	
R402	EVM7JGA00814	V.RESISTOR	1		C5056,57	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	<u> </u>
R403	EVM7JGA00B54	V.RESISTOR 50K	1		C5058	VCYE1C104MR1	S.CAPACITOR 16V 0.1U	1	
/R405	EVM7JGA00B14	V.RESISTOR	1		C5059	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
R406	EVM7JGA00854	V.RESISTOR 50K	1		C5060	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
/R407	EVM7JGA00B24	V.RESISTOR 20K	1		C5061	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
/R4001	EVM7DGA00B24	V.RESISTOR 20K	1		C5062	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
/R4002 /R4003	EVM7DGA00814	V.RESISTOR 10K V.RESISTOR 20K	1		C5063 C5066	ECUM1H680JCN ECUM1C224ZFN	C.CAPACITOR CH 50V 68P C.CAPACITOR CH 16V 0.22U	1	
/R4004-06	EVM7DGA00B24 EVM7DGA00B14	V.RESISTOR 20K	3		1 1000	ECUPILCZZ4ZFN	C.CMFMCITOR CH 10V U.ZZU	1	
/R4007,08	EVN32CA00B25	V.RESISTOR 200K	2		11			+	
/R4501,02	EVM7DGA00B23	V.RESISTOR 2K	2		1			†	
/R4503	EVM7DGA00B14	V.RESISTOR 10K	1		05001,02	MA151K	DIODE	2	∢ >
/R4501,02	EVM7DGA00B23	V.RESIS	TOR 2K	TOR 2K 2	TOR 2K 2	TOR 2K 2	TOR 2K 2	TOR 2K 2	TOR 2K 2

Ref.No.	Part No.	Part Name & Description			Ref.No.	Ц	Part No.	Part Name & Description	Pcs	Remarks
D3004	MA151K	DIODE	1	<r></r>		\Box				
			-			H		MISCELLANEOUS	_	ļ
						H	VSC3119	SHIELD CASE (MAIN)	1	
IC5001	AN3334K	IC	1	<r></r>		H	VSC3039	SHIELD CASE (TOP)	1	
IC5002	BA7740FS	IC	1	<r></r>			VSC3040	SHIELD CASE (BOTTOM)	1	
1C5003	AN3370K	IC	1	<r></r>		П	VJF0215	BINDER	1	
	+		-			Н				
	 		_			Н				
L5001-04	VLQ0460	COIL	4			Н			_	
L5007	VLQ0460	COIL	1			Н			<u> </u>	
L5008	VLQ0188J5R6	COIL 5.6UH	1			H	VEP06920B	P.C.BOARD W/COMPONENT	-	
						П		SYSCON & SERVO	-	
									-	
P5001	VJP3091	CONNECTOR (MALE)	1			Ц				
P5002	VJS2603	CONNECTOR (FEMALE)	1			Н		-		
P5003	VJP3091	CONNECTOR (MALE)	1			Н				
		(1122)				H				
					11	H	· · · · · · · · · · · · · · · · · · ·			
05005					1	\sqcap		CAPACITORS		<u> </u>
Q5001	MSB709-R	TRANSISTOR	1	<r></r>	C2001		ECEA0JU102	E.CAPACITOR 6.3V 1000U	1	
Q5002 Q5003	MSC2295-B XN4504	TRANSISTOR	1_	<r></r>	C2002		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
Q5004,05	MSC2295-B	TRANSISTOR TRANSISTOR	2	<r></r>	C2005		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
	11002233-0	IIIANGTOION		<r></r>	C2006		ECEA1CKA330	E.CAPACITOR 16V 33U	1	
					C2007 C2008		ECUM1H104ZFN ECUM1H220JCN	C.CAPACITOR CH 50V 0.1U C.CAPACITOR CH 50V 22P	1	<u> </u>
			_		C2009	+	ECUM1H180JCN	C.CAPACITOR CH 50V 22P C.CAPACITOR CH 50V 18P	1	
QR5001	MRN1404	TRANSISTOR-RESISTOR	1	<r></r>	C2013		ECEA1HKN010	E.CAPACITOR CH SOV 18P	1	
					C2016		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
					C2017		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
	ļ	DESISTANC			C2018		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
R5001	ERJ6GEYJ472	RESISTORS M.RESISTOR CH1/16W 4.7K	-		C2019		ECQB1H472JF	P.CAPACITOR 50V 4700P	1	
R5003	ERJ6GEYOROO	M.RESISTOR CH 1/10W 4.7K	1		C2021		ECEA1CKA330	E.CAPACITOR 16V 33U	1	
35004	ERJ6GEYJ101	M.RESISTOR CH1/16W 100	1		C2022 C2023		ECEA1CKA220 ECEA0JKA470	E.CAPACITOR 16V 22U	1	
35005	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1		C2024		ECUMIH471JCN	E.CAPACITOR 6.3V 47U C.CAPACITOR CH 50V 470P	1	
R5006	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1		C2025		ECEAOJKA221	E.CAPACITOR 6.3V 220U	1	
₹5007	ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1		C2026	Ti	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
R5008	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1		C2027		ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
85010	ERJ6GEYJ471 ERJ6GEYK1R0	M.RESISTOR CH1/16W 470 M.RESISTOR CH1/16W 1.0	1		C2028		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
35011-14	ERJ6GEYJ182	M.RESISTOR CH1/16W 1.0 M.RESISTOR CH1/16W 1.8K	1 4		C2029,30		ECEA1EKN3R3	E.CAPACITOR 25V 3.3U	2	
15015-18	ERJ6GEYJ100	M.RESISTOR CH1/16W 1.6K	4		C2031 C2032		ECUM1H223ZFN	C.CAPACITOR CH 50V 0.022U	1	
15019	ERJ6GEYJ391	M.RESISTOR CH1/16W 390	1		C2032		ECUM1H392KBN ECUM1H104ZFN	C.CAPACITOR CH 50V 3900P C.CAPACITOR CH 50V 0.1U	1	
5020,21	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	2		C2034		ECQB1H683JF	P.CAPACITOR CH 50V 0.1U P.CAPACITOR 50V 0.068U	1	
5022	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1		C2035		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
5026	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1		C2036		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
5027 5028	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1		C2037		ECEA1HU4R7	E.CAPACITOR 50V 4.7U	1	
5028	ERJ6GEYG243 ERJ6GEYG273	M.RESISTOR CHI/16W 24K M.RESISTOR CHI/16W 27K	1		C2038		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
5030	ERJ6GEYJ391	M.RESISTOR CH1/16W 27K M.RESISTOR CH1/16W 390	1		C2039,40		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	2	
5031	ERJ6GEYJ103	M.RESISTOR CHI/16W 390	1		C2041 C2042-56		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
5032	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1		C2042-56 C2065		ECUM1H271JCN ECEAOJKA470		15	
5033	ERJ6GEYJ273	M.RESISTOR CH1/16W 27K	1		C2067		ECUM1H102KBN	E.CAPACITOR 6.3V 47U C.CAPACITOR CH 50V 1000P	1	
5034	ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1		C2069		CUM1H271JCN	C.CAPACITOR CH 50V 1000P C.CAPACITOR CH 50V 270P	1	
5036	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1		C2070		CUM1H104ZFN	C.CAPACITOR CH 50V 2/0P	1	
5037,38	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	2		C2071		CEA1ASS332	E.CAPACITOR 10V 3300U	1	
5039 5040	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1		C2072		CQB1H332JF	P.CAPACITOR 50V 3300P	1	
5041	ERDS2TJ151 ERJ6GEYJ180	C.RESISTOR 1/4W 150 M.RESISTOR CH1/16W 18	1		C2075		CEA1CKA220	E.CAPACITOR 16V 22U	1	
5042,43	ERJ6GEYJ100	M.RESISTOR CH1/16W 18 M.RESISTOR CH1/16W 10	2		C2076		CEAOJKA470	E.CAPACITOR 6.3V 47U	1	
5044,45	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2		C2301 C2303-06		CEA0JKA470		1	
5046,47	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2		C2303-06 C2307		CQV1H104JZ CQB1H683JF	P.CAPACITOR 50V 0.1U	4	
5056	VRE0034E182	M.RESISTOR CH 1/10W 1.8K	1		C2308,09		CEA1HKN4R7	P.CAPACITOR 50V 0.068U E.CAPACITOR 50V 4.7U	1	
5057	VRE0034E332	M.RESISTOR CH 1/10W 3.3K	1		C2310		CQB1H473JF	P.CAPACITOR 50V 4.70 P.CAPACITOR 50V 0.047U	2	
5058	ERJ6GEYOROO	M.RESISTOR CH 1/10W 0	1		C2311		CEAOJKA470		1	
5059	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1		C2312	E	CQV1H474JZ		1	
5070	ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1		C2313	Ε	CEA1EKA470		1	
	ļ				C2314	E	CEAOJKA470	E.CAPACITOR 6.3V 47U	1	
			+		C2315		CUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
R5001,02	EVN32CA00B23	V.RESISTOR 2K	2		C2316				1	
	1	ΔN	-		C2318,19 C2320-23	_			2	
			+		LC2320-23	1	CUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
			-+		1	1_				

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
2324	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C6043,44	ECUM1H221KBN	C.CAPACITOR CH 50V 220P	2	
2325	ECEA1CKA470	E.CAPACITOR 16V 47U	1		C6045	ECUM1H271KBN	C.CAPACITOR CH 50V 270P	1	
2326,27	ECEAOJKA470	E.CAPACITOR 6.3V 47U	2		C6046,47	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
2328	ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	1		C6048	ECEA1EU470	E.CAPACITOR 25V 47U	1	
2329,30 2333	ECUM1H221JCN ECEA1HKN2R2	C.CAPACITOR CH 50V 220P E.CAPACITOR 50V 2.2U	2		C6049 C6050	ECQV1H104JZ ECEA1EKA470	P.CAPACITOR 50V 0.1U E.CAPACITOR 25V 47U	1	
2336	ECEA1HKN2R2	E.CAPACITOR 50V 2.2U	1		C6050	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
2337,38	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2		C6052	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
2339	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1					-	
2340	ECEA1HKN4R7	E.CAPACITOR 50V 4.7U	1						
2343,44	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2						
2501	ECQB1H473JF	P.CAPACITOR 50V 0.047U	1		D2001	MA151WK	DIODE	1	∢ R>
2502	ECQB1H222JF ECQB1H273JF	P.CAPACITOR 50V 2200P P.CAPACITOR 50V 0.027U	1 1		D2003,04 D2005	11EQS04 MA151WK	DIODE	2	∢ >
2504	ECQB1H273JF	P.CAPACITOR 50V 0.0270 P.CAPACITOR 50V 2200P	1		D2304,05	MA151WK	DIODE	2	∢> ∢>
2510	ECEA1CKA470	E.CAPACITOR 16V 47U	i		02306	MA4062M	DIODE	1	₹ >
2512-14	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3		D2501,02	MA151K	DIODE	2	-R>
2516-19	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4		D2901	MA3160-L	DIODE	1	∢ R>
2901	ECEA1CKA101	E.CAPACITOR 16V 100U	1		D2902	110Q04	DIODE	1	< ₹ >
2902	ECEA1HKA010	E.CAPACITOR 50V 1U	1		D2903	MA3160-L	DIODE	1	< R >
2903	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1		D2904	110004	DIODE	1	∢ >
2904	ECUM1H820JCN ECUM1H561JCN	C.CAPACITOR CH 50V 82P C.CAPACITOR CH 50V 560P	1		D2905 D2906	MA3160-L 11DQ04	DIODE	1	∢>
2905	ECEA1HKA010	E.CAPACITOR CH 50V 380P	1		02907	MA701	DIODE	1	∢> ∢>
2907	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		D2908	8P2M	DIODE	1	<r>></r>
2908	ECQB1H222JF	P.CAPACITOR 50V 2200P	1	-	D2909	MA3020	DIODE	1	4R>
2909	ECEA1EU221	E.CAPACITOR 25V 220U	1		D2911	MA151K	DIODE	1	-R>
2910	ECEA1HU4R7	E.CAPACITOR 50V 4.7U	1		D2912	MA4140-M	DIODE	1	∢ >
2911	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1		D2913	MA3140-M	DIODE	1	4₹>
2912	ECEA1EU221	E.CAPACITOR 25V 220U	1		D2914-16	MA3160-H	DIODE	3	
2913	ECEA1HU4R7	E.CAPACITOR 50V 4.7U C.CAPACITOR CH 50V 1000P	1		D2917-19 D2920	MA151K	DIODE	3	
2914	ECUM1H102KBN ECEA1EU221	E.CAPACITOR CH 50V 1000P	1		D2920 D2921	MA3068M MA165VT	DIODE	1	<r> <r></r></r>
2916,17	ECEA1EU101	E.CAPACITOR 25V 100U	2		D2922	MA3110-H	DIODE	1	<r>></r>
2918	ECEA1CKA101	E.CAPACITOR 16V 100U	1		06001	MA4075M	DIODE	1	4R>
2919	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		D6002	MA151K	DIODE	1	-R>
2920	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1		D6003	11EQS04	DIODE	1	< ₹>
2921	ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	1		D6004	10E1	DIODE	1	∢ R>
2922	ECEA1CKA101	E.CAPACITOR 16V 100U	1		D6005	MA170	DIODE	1	< R>
C2923 C2925	ECUM1H103ZFN ECEA1EU101	C.CAPACITOR CH 50V 0.01U E.CAPACITOR 25V 100U	1		D6006 D6007	MA151K MA153	DIODE	1	∢>
2926	ECEATEDIOI	E.CAPACITOR 25V 1000	1		D6007	MA151K	DIODE DIODE	1	<r> <r></r></r>
26001	ECEA1EU4R7	E.CAPACITOR 25V 4.7U	î		D6009	11EQS04	DIODE	1	
26002	ECQB1H104JF	P.CAPACITOR 50V 0.1U	1		D6010	MA153	DIODE	1	∢ R>
26003,04	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2		D6011	10E1	DIODE	1	< ₹ >
06005,06	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2		D6012	MA151K	DIODE	1	4₹>
6007,08	ECEA1ASS332	E.CAPACITOR 10V 3300U	2		D6013	MA170	DIODE	1	∢>
C6009 C6010	ECUM1E104ZFN ECOV1H224JZ	C.CAPACITOR CH 25V 0.1U	1		06014	MA151K	DIODE	1	
26011	ECEA1CU222	P.CAPACITOR 50V 0.22U E.CAPACITOR 16V 2200U	1		D6015,16 D6017	MA153 MA4075M	DIODE	2	<r> <r></r></r>
26012	ECEA1HKA010	E.CAPACITOR 50V 1U	1		D6017	MA153	DIODE	1	
26013	ECEAOJKA470	E.CAPACITOR 6.3V 47U	1		1	111233		-	1 11
26014	ECEA1CKA470	E.CAPACITOR 16V 47U	1					1	
06015	ECQB1H103JF	P.CAPACITOR 50V 0.01U	1						
06016	ECEA1CKA100	E.CAPACITOR 16V 10U	1		IC2001	MN6743VCRH	IC	1	
26017	ECQB1H472JF	P.CAPACITOR 50V 4700P	1		IC2003	MN1382-R	IC	1	⋖₹>
C6018 C6019	ECQB1H333JF	P.CAPACITOR 50V 0.033U	1		IC2004	AN3727S	IC	1	
C6020	ECQB1H103JF ECEA1CKA470	P.CAPACITOR 50V 0.01U E.CAPACITOR 16V 47U	1		IC2007 IC2010	MC14011BF UPC358G2	IC IC	1	₹ >
C6020	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	$\frac{1}{1}$		IC2010	MC14070BF	IC	1	< ₹ >
06022	ECEA1CKA470	E.CAPACITOR CH SOV 0.010	1		IC2012	TC7S04F	IC	1	- T-
05023	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		IC2014	LM393PS	IC	1	∢ R>
26024-27	ECQB1H102JF	P.CAPACITOR 50V 1000P	4		IC2301	AN3815K	IC	1	
26028	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1		IC2302	XRA6435S	IC	1	∢>
26029,30	ECEA1CKA100	E.CAPACITOR 16V 10U	2		IC2304	LM393PS	IC	1	
C6031 C6032	ECEA1CKA470	E.CAPACITOR 16V 47U	1		IC2305	UPC4556G2	IC	1	
06033,34	ECEA1HKN010 ECQB1H104JF	P.CAPACITOR 50V 1U P.CAPACITOR 50V 0.1U	2	······································	IC2307 IC2501,02	AN78N12 LM324NS	IC IC	1	
06035,34	ECEA1CKA101	E.CAPACITOR 16V 100U	1		IC2501,02	LM393PS	IC	2	
C6036	ECEA1CN101	E.CAPACITOR 16V 100U	1		IC2505	MC14053BF	IC	1	
26037	ECEAOJKA470	E.CAPACITOR 6.3V 47U	1		IC2506	MC14052BF	IC	1	
26038,39	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2		IC2507	MC14053BF	IC	1	
26040	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1		IC2901	BA6149LS	IC	1	
C6041	ECEA1CKA220	E.CAPACITOR 16V 22U	1		IC2902	LM393PS	IC	1	
C6042	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1		IC6001	MN1882410H8C	IC	1	∢>
1			1		11			1	L

Ref.No.	Part No.	Part Name & Description	Pcs		Ref.No.	Part No.	Part Name & Description Pcs	Remarks
IC6002	LM393PS	IC	1					
106003	MN1382-R	IC	1	<r></r>				
C6004	MN1382-U	IC	1		_			
C6006	LM324NS M54649L	IC IC	1	<r></r>	QR2001-08	MRN1404	TRANSISTOR-RESISTOR 8	
C6007	AN78M12	IC	1	<r></r>	QR2501-05	MRN1404	TRANSISTOR-RESISTOR 5	∢ R>
C6008	UPD40198G	IC	$-\frac{1}{1}$	<r></r>	QR2901,02	MRN1404	TRANSISTOR-RESISTOR 2	
C6009	MN1382-R	IC	1	<r></r>	QR2903,04	MRN2404	TRANSISTOR-RESISTOR 2	
C6010	TC4S69F	IC	1	<r></r>	QR2905	MRN1404	TRANSISTOR-RESISTOR 1	∢ R>
C6011	UPC2405HF	IC	+	<r></r>	QR6001	MRN2402	TRANSISTOR-RESISTOR 1	∢ >
C6012	MC14053BF	IC	1	<r></r>	QR6002	MRN2404	TRANSISTOR-RESISTOR 1	∢>
	7.02.7033BI	10	-	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	QR6003	MRN1403	TRANSISTOR-RESISTOR 1	∢>
	1		-	·	QR6004	MRN1404	TRANSISTOR-RESISTOR 1	∢ R>
-			├		QR6005 QR6006	MRN1403	TRANSISTOR-RESISTOR 1	< R>
6004	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1		QR6007	MRN2402 MRN1402	TRANSISTOR-RESISTOR 1	∢ R>
		7.11.252.161. 5.7.27.201. 0	÷		QR6008	DTA143XK	TRANSISTOR-RESISTOR 1 TRANSISTOR-RESISTOR 1	< R >
			-		QR6009	MRN1404		
			_		QR6010	MRN2402		∢ >
2001-05	VLQEL05S101J	COIL 1000H	5		QR6011-15	MRN1404		< R>
2006	VLQ0129	COIL	1		Q00011=13	PIRN1404	TRANSISTOR-RESISTOR 5	< ₹ >
2009-16	VLQ0163J221	COIL 220UH	8		1 }+	+		
2018	VLQ0163J221	COIL 220UH	1		1	+	1	1
2301,02	VLQEL05S101J	COIL 100UH	2		11	1	RESISTORS	
2304	VLQEL05S101J	COIL 100UH	1		R2001	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K 1	
2502	VLQEL05S101J	COIL 100UH	1		R2002	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K 1	
2901	VLQEL05S101J	COIL 100UH	1		R2003	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K 1	
2902	VLQ0128	COIL	1		R2004	ERJ6GEYJ471	M.RESISTOR CH1/16W 470 1	
2903-05	ELC10E014	COIL	3		R2008,09	ERJ6GEYJ224	M.RESISTOR CH1/16W 22OK 2	
5001	VLQEL05S101J	COIL 1000H	1		R2014	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K 1	
5002	VLQEL05S150J	COIL 15UH	1		R2015	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K 1	
5003	VLQEL05S471J	COIL 470UH	_ 1		R2016	ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K 1	
5004	VLQ0163J221	COIL 220UH	1		R2017	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K 1	
					R2018,19	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K 2	
	ļ				R2020	ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K 1	
2001					R2022	ERJ6GEYJ221	M.RESISTOR CH1/16W 220 1	
2001	VJP1230T	CONNECTOR (MALE)	1		R2023	ERJ6GEYG622	M.RESISTOR CH1/16W 6.2K 1	
2301	VJP3078	CONNECTOR (MALE)	1		R2025	ERJ6GEYJ224	M.RESISTOR CH1/16W 220K 1	
2502	VJS1477	CONNECTOR (FEMALE)	1		R2026	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K 1	
2901	VJS3135 VJS2149W	CONNECTOR (FEMALE) CONNECTOR (FEMALE)	1		R2027	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K 1	
5001	VJS2149W	CONNECTOR (FEMALE)	1		R2030,31	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K 2	
5002	VJP3529	CONNECTOR (MALE)	1		R2032	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0 1	
5003	VJS1477	CONNECTOR (FEMALE)	1		R2039	ERJ6GEYJ101	M.RESISTOR CH1/16W 100 1	
5004	VJP1230T	CONNECTOR (MALE)	1		R2041 R2043,44	ERJ6GEYJ101	M.RESISTOR CH1/16W 100 1	
005-07	VJS3202B020Z	CONNECTOR (FEMALE)	3			ERJ6GEYJ101	M.RESISTOR CH1/16W 100 2	
8008	VJP1230T	CONNECTOR (MALE)	1		R2045-47 R2048	ERJ6GEYG223	M.RESISTOR CH1/16W 22K 3	
	10,1100	OSTALOTOR (IVEE)	-		R2049	ERJ6GEYG333	M.RESISTOR CH1/16W 33K 1	
					R2050	ERJ6GEYG224 ERJ6GEYJ103	M.RESISTOR CH1/16W 220K 1	
					R2051,52	ERJ6GEYJ223	M.RESISTOR CH1/16W 10K 1	
001	MSD601-R	TRANSISTOR	1	<r></r>	R2053	ERJ6GEYJ102	M.RESISTOR CH1/16W 22K 2 M.RESISTOR CH1/16W 1K 1	
901	MSB709-R	TRANSISTOR	1	<r></r>	R2054	ERJ6GEYJ273		
902,03	2SD601A	TRANSISTOR	2	<r></r>	R2058,59	ERJ6GEYJ103		
904	2SB1151	TRANSISTOR	1	<r></r>	R2060,61	ERJ6GEY0R00	LI OMATATAN ALL A LIVE	
905,06	MSB709~R	TRANSISTOR	2	<r></r>	R2070	ERJ6GEYOROO		
909	2SB772-QRS	TRANSISTOR	1		R2072,73	ERJ6GEYG223		
910,11	MSB709-R	TRANSISTOR	2	<r></r>	R2074	ERJ6GEYJ563	M.RESISTOR CH1/16W 22K 2 M.RESISTOR CH1/16W 56K 1	
912	2SB772-QRS	TRANSISTOR	1		R2075	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0 1	
913	MSD601-R	TRANSISTOR	1	<r></r>	R2076	ERJ6GEYJ471	M.RESISTOR CH1/16W 470 1	
914	2SD1275	TRANSISTOR	1	<r></r>	R2080,81	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K 2	
001	2SD1474	TRANSISTOR	1	<r></r>	R2083	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K 2	
002,03	MSD601-R	TRANSISTOR	2	<r></r>	R2301	ERDS2TJ150	C.RESISTOR 1/4W 15 1	
004	2SD973	TRANSISTOR	1	<r></r>	R2302	ERX12SJR68	M.RESISTOR 1/2W 0.68 1	
005	MSB709-R	TRANSISTOR	1	<r></r>	R2303,04	ERDS2TJ150	C.RESISTOR 1/4W 15 2	
006	2SB819	TRANSISTOR	1	<r></r>	R2305	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K 1	
007	MSD601-R	TRANSISTOR	1	<r></r>	R2306	ERJ6GEYJ332	M.RESISTOR CHI/16W 3.3K 1	
008	2SB819	TRANSISTOR		<r></r>	R2307,08	ERJ6GEYJ273	M.RESISTOR CH1/16W 27K 2	
009	MSD601-R	TRANSISTOR	_	<r></r>	R2309	ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K 1	
011	2SD636-R	TRANSISTOR		<r></r>	R2310	ERJ6GEYG242	M.RESISTOR CH1/16W 2.4K 1	
012	MSD601-R	TRANSISTOR	-+	<r></r>	R2311	ERJ6GEYJ684	M.RESISTOR CH1/16W 680K 1	
013	2SB819	TRANSISTOR		<r></r>	R2312	ERJ6GEYG273	M.RESISTOR CH1/16W 27K 1	
014	MSD601-R	TRANSISTOR		<r></r>	R2313	ERDS2TJ330	C.RESISTOR 1/4W 33 1	
015	2SD1273	TRANSISTOR	_	<r></r>	R2314	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K 1	
016	MSD601-R	TRANSISTOR		<r></r>	R2315	ERDS2TJ330	C.RESISTOR 1/4W 33 1	
017	2SB941	TRANSISTOR	_	<r></r>	R2316	ERX12SJR47	M.RESISTOR 1/2W 0.47 1	
40	MSD601-R	TRANSISTOR	1	<r></r>	R2317	ERDS2TJ330	C.RESISTOR 1/4W 33 1	
					<u> </u>			

Ref.No.	Part No.	Part Name & Description Po	-	Remarks Ref.N	о.		Part Name & Description		Remarks
2318	ERJ6GEYJ330		1	R6013		ERJ6GEYJ103 ERD2FCG220	M.RESISTOR CH1/16W 10K C.RESISTOR 2W 22	1	
2321	ERJ6GEYJ103 ERJ6GEYJ103		1	R6015	-	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
324	ERJ6GEYJ224		1	R6016	-+-	ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1	
325-28	ERJ6GEYJ103		4	R6017	+	ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1	
329,30	ERJ6GEYJ184		2	R6018,19		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
331	ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1	R6020		ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1	
334	ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1	R6021		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
335	ERJ6GEYJ224		1	R6022		ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1	
340,41	ERJ6GEYOROO		2	R6023		ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
501	ERJ6GEYJ682		1	R6024-27		ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	4	
502	ERJ6GEYJ334		1	R6028		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
503	ERJ6GEYJ274		1	R6029	-	ERDS2TJ333 ERJ6GEYJ103	C.RESISTOR 1/4W 33K M.RESISTOR CH1/16W 10K	1	
504	ERJ6GEYJ123		1	R6030 R6031	-	ERJ6GEYG102	M.RESISTOR CH1/16W 10K M.RESISTOR CH1/16W 1K	1	
505	ERJ6GEYJ334 ERJ6GEYJ154		1	R6032	+	ERJ6GEYG302	M.RESISTOR CH1/16W 3K	1	
507-10	ERJ6GEYG104		4	R6033		ERJ6GEYG102	M.RESISTOR CH1/16W 1K	1	
511-15	ERJ6GEYJ104	1	5	R6034,35	\pm	ERJ6GEYG103	M.RESISTOR CH1/16W 10K	2	
516	ERJ6GEYG393		1	R6036-39		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	4	
517	ERJ6GEYG223		1	R6040,41		ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	2	
518	ERJ6GEYF124		1	R6042	-	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
519,20	ERJ6GEYG124		2	R6043	_	ERJ6GEYJ392	M.RESISTOR CH1/16W 3.9K	1	
521	ERJ6GEYG154		1	R6044	\top	ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1	
522	ERJ6GEYG104		1	R6045		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
2523,24	ERJ6GEYJ102		2	R6046-50		ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	5	
2525	ERJ6GEYJ223		1	R6051		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
2526	ERJ6GEYJ823		1	R6052-59		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	8	
901	ERJ6GEYJ563		1	R6060-6		ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	6	
2902	ERJ6GEYJ103		1	R6066		ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K	1	
903	ERJ6GEYJ154		1	R6067,6	3	ERJ6GEYJ821	M.RESISTOR CH1/16W 820	2	
904	ERJ6GEYJ562		1	R6069		ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K	1	
905,06	ERJ6GEYJ103		2	R6070		ERJ6GEYG181	M.RESISTOR CH1/16W 180	1	
907	ERJ6GEYJ222		1	R6071		ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K	1	
908	ERJ6GEYJ104		1	R6072		ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
909-12	ERJ6GEYJ103		4	R6073		ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
2913	ERDS2TJ270		1	R6074		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
2914	ERG2SJ561		1	R6075		ERDS2TJ151	C.RESISTOR 1/4W 150	1	
2915	ERJ6GEYJ104		1	R6076	. -	ERJ6GEYJ683	M.RESISTOR CH1/16W 68K M.RESISTOR 1W 30	1	
2916 2917-19	ERJ6GEYJ153 ERJ6GEYJ103		3	R6077,75	-	ERG1SJ300 ERJ6GEYJ473	M.RESISTOR 1W 30 M.RESISTOR CH1/16W 47K	1	
2920	ERJ6GEYJ103		1	R6080	\dashv	ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K	$\frac{1}{1}$	
2921	ERJ6GEYJ222		1	R6081		ERDS2TJ331	C.RESISTOR 1/4W 330	+ 1	
2922	ERDS2TJ391		1	R6082		ERJ6GEYJ222	M.RESISTOR CHI/16W 2.2K	1	
2923	ERDS2TJ182		1	R6083		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
2924	ERJ6GEYJ104		1	R6084-8	,	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	4	
2925	ERJ6GEYJ153		1	R6088	$\neg \vdash$	ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
2926-28	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	3						
2929	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1						
2930	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1						
2931	ERDS2TJ391		1	T6001	$_{ m I}$	EIQ7QF0028	TRANSFORMER	1	
2932	ERDS2TJ182		1						
2933	ERJ6GEYJ102		1					1_	
2934,35	ERJ6GEYJ103		2			<u> </u>		1	
936	ERJ6GEYJ331		1	VR2001		EVN49CA00B23	V.RESISTOR 2K	1	
2937	ERJ6GEYJ103		1	VR2002		EVN49CA00B15	V.RESISTOR 100K	1	ļ
2939	ERJ6GEYJ103		1	VR2004)c	EVN49CA00B25	V.RESISTOR 200K	1	
2940	ERJ6GEYJ102		1	VR2005,	JD	EVN49CA00B15	V.RESISTOR 100K	2	
2941	ERJ6GEYJ331		1			ļ		+-	
2942-44	ERJ6GEYJ271	M.RESISTOR CH1/16W 270 M.RESISTOR CH1/16W 10K	3		-+			+	ļ
2945,46 2947	ERJ6GEYJ103		2	V2001		NEXUSUE	CRYSTAL OSCILLATOR	1	0>
947-51	ERJ6GEYJ101 ERJ6GEYJ103	M.RESISTOR CH1/16W 100 M.RESISTOR CH1/16W 10K	3	X2001 X2901		VSX0296 VSX0136	CRYSTAL OSCILLATOR	1	∢ > ∢ >
2949-51	ERJ6GEYJ103		1	X6001	+	VSX0136 VSX0230	CRYSTAL OSCILLATOR	1	<r></r>
952	ERJ6GEYJ103		1	10001	+	43VV230	GRISTAL USCILLATUR	+-	-A-
954	ERJ6GEY0R00		1		+			+	
001,02	ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	2	 	\dashv	-		+	
5003	ERJ6GEYG181	M.RESISTOR CH1/16W 180	1				MISCELLANEOUS	+	
5004	ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1			VJF0304	CLIP	2	
5005,06	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2		\dashv	VMC0075	HEAT SINK SPRING	1	
5003,00	ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1	 	+	VMC0493	HEAT SINK SPRING	1	
5008	ERDS2TJ181	C.RESISTOR 1/4W 180	1			VSC1215	IC HEAT SINK	1	
009	ERJ6GEYJ474	M.RESISTOR CH1/16W 470K	1		$\neg +$	VSC3405	HEAT SINK (A)	+ 1	
5010	ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1		\dashv	VWJ04CN280CC	FLEXIBLE CABLE	2	
1010		M.RESISTOR CH1/16W 1K	1		\neg	VWJ0753	FLEXIBLE CABLE	1	
5010	ERJ6GEYJ102	LIVESTS LOW CUITATOM TV							
	ERJ6GEYJ102 ERJ6GEYJ121	M.RESISTOR CH1/16W 120	1			VMX0985	SPACER	2	

Ref.No.	Part No.	Part Name & Description	Pc	Remarks	Ref.No.	Part		Part Name & Des			
			-	·	L6702,03	VLQEL05		COIL	120UH	1	
			+		10/02,03	VLQEL05	KIOIJ	COIL	100UH	2	
			†	 		 		-		+-	
					11	 				╁	
********	VEP06921B	P.C.BOARD W/COMPONENT			LD6701-04	LN440YC	PUV	LED		4	
		SYSCON & SERVO			LD6705	LN41YCP	HL	LED		1	
					LD6706,07	LN440YC	PUV	LED		2	
			<u> </u>		LD6709	LN41YCP	HL	LED		1	
					LD6710,11	LN340GC	P	LED		2	
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	-	CAPACITORS	 		P6701	VJS2889		CONNECTOR (FEMALE)		1	
C6701,02	ECEA1AKS221	E.CAPACITOR 10V 220U	2		P6702	VJP3076		CONNECTOR (MALE)		1	
C6703-05	ECEA1HKS220	E.CAPACITOR 50V 22U	3			-				_	
C6706	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1							<u> </u>	
C6707	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1		06701	0007004			· · · · · · · · · · · · · · · · · · ·	<u> </u>	
C6708,09	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	 	Q6701 Q6702	2SB709A		TRANSISTOR		1	4₹>
C6710	ECEA1CKS330	E.CAPACITOR 16V 33U	1	 	Q6703-06	MSD602-I		TRANSISTOR	·	1	
C6711	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1		Q6707-10	MSD601-F		TRANSISTOR		4	∢ ?>
C6712	ECEA1CKS330	E.CAPACITOR 16V 33U	1		Q6707-10 Q6711	MSD602-F		TRANSISTOR TRANSISTOR		4	∢>
C6713	ECUMIH101JCN	C.CAPACITOR CH 50V 100P	1		1	1132002-1	`	INMISTRICK		1	∢ R>
C6714	ECEA1AKS221	E.CAPACITOR 10V 220U	1		11	+				-	
C6715	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1		-1				· — —	-	
C6716,17	ECUMIH220JCN	C.CAPACITOR CH 50V 22P	2		7	 		RESISTORS		-	
C6718-20	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	3		R6701	ERJ14YJ	152	M.RESISTOR 1/4W	1.5K	1	<u> </u>
C6721	ECEA1CKS100	E.CAPACITOR 16V 10U	1		R6702	ERJ6GEY.		M.RESISTOR CH1/16W	100K	1	
C6722	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1		R6703,04	ERJ6GEY.		M.RESISTOR CH1/16W	4.7K	2	
C6723-25	ECEA1CKS470	E.CAPACITOR 16V 47U	3		R6705	ERJ6GEY.		M.RESISTOR CH1/16W	560K	1	
26726	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1		R6706	ERJ6GEY.	1681	M.RESISTOR CH1/16W	680	1	
26727,28	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2		R6707,08	ERJ6GEY.	1683	M.RESISTOR CH1/16W	68K	2	
26730	ECEA1AKS221	E.CAPACITOR 10V 220U	1		R6709	ERJ6GEY.	1564	M.RESISTOR CH1/16W	560K	1	
					R6710,11	ERJ6GEYJ		M.RESISTOR CH1/16W	10K	2	
	 				R6712-16	ERJ6GEYJ		M.RESISTOR CH1/16W	22K	5	
06702	MA4056-M	DIODE	<u> </u>		R6717	ERJ6GEYJ		M.RESISTOR CH1/16W	470	1	
06702	MA701A	DIODE	1	<r></r>	R6718-29	ERJ6GEYJ		M.RESISTOR CH1/16W	10K	12	
06704	MA3300-L	DIODE	1	<r></r>	R6730-33	ERJ6GEYJ		M.RESISTOR CH1/16W	22K	4	
06705,06	MA153	DIODE	2	<r></r>	R6734,35	ERJ6GEYJ		M.RESISTOR CH1/16W	10K	2	
06707-10	MA152K	DIODE	4	<r></r>	R6736 R6737-49	ERJ6GEYJ		M.RESISTOR CH1/16W	3.9K	1	
6711-22	MA151K	DIODE	12	<r></r>	R6750	ERJ6GEYJ ERJ6GEYJ		M.RESISTOR CH1/16W	47K	13	
06724	MA151K	DIODE	1	<r></r>	R6752-59	ERJ6GEYJ		M.RESISTOR CH1/16W	1K	1	
6727-35	MA151K	DIODE	9	<r></r>	R6760-67	ERJ6GEYJ		M.RESISTOR CH1/16W	47K	8	
6738	MA701A	DIODE	1	<r></r>	R6768-71	ERJ6GEYJ		M.RESISTOR CH1/16W M.RESISTOR CH1/16W	10K	8	
6739,40	MA151K	DIODE	2	<r></r>	R6772,73	ERJ6GEYJ		M.RESISTOR CH1/16W	22K	4	
6741	MA153	DIODE	1	<r></r>	R6776-82	ERJ14YJ4		M.RESISTOR 1/4W	510 47K	7	
					R6784-86	ERJ14YJ4		M.RESISTOR 1/4W			
					R6787	ERJ6GEYJ		M.RESISTOR CH1/16W	47K 100K	3	· ··· · · · · · · · · · · · · · · · ·
					R6788	ERJ6GEYJ		M.RESISTOR CH1/16W	3.3K	$\frac{1}{1}$	
P6701	VSL0313	DISPLAY TUBE	1		R6789	ERJ6GEYJ		M.RESISTOR CH1/16W	100K	1	·····
					R6790	ERJ6GEYJ		M.RESISTOR CH1/16W	3.3K	1	
					R6791	ERJ6GEYJ		M.RESISTOR CH1/16W	100K	1	
1.6701					R6792	ERJ6GEYJ.		M.RESISTOR CH1/16W	3.3K	1	
L6701	VLF0523	FILTER	1		R6793	ERJ6GEYJ		M.RESISTOR CH1/16W	100K	1	
	 				R6794-98	ERJ6GEYJ.	332	M.RESISTOR CH1/16W	3.3K	5	
	+				R6799	ERJ6GEYJ	104	M.RESISTOR CH1/16W	100K	1	
C6701	1100750263000	TC			R6800	ERJ6GEYJ:	332	M.RESISTOR CH1/16W	3.3K	1	
C6701 C6702	UPD75236J029	IC ·	1	<r></r>	R6801,02	ERJ6GEYJ2	224	M.RESISTOR CH1/16W	220K	2	
C6703	MN1382-R	IC	1	<r></r>	R6803	ERJ6GEYJ:		M.RESISTOR CH1/16W	390	1	
C6704	MN1382-U UPC393G2	IC IC	1	<r></r>	R6804	ERJ6GEYF	124	M.RESISTOR CH1/16W	120K	1	
C6705	UPD6253GS	IC	1	<r></r>	R6805	ERJ6GEYJ		M.RESISTOR CH1/16W	75K	1	
C6706	MC74HC4053F	IC	1	<r></r>	R6806	ERJ6GEY0F		M.RESISTOR CH 1/10W	0	1	
C6707	NJM2068MD	IC	1	<r></r>	R6807	ERJ6GEYJ:		M.RESISTOR CH1/16W	33	1	
	. NOT IE COOK!	**	1	<r></r>	R6809	ERJ6GEYJ1		M.RESISTOR CH1/16W	1.8K	1	
	-		+		R6810-12	ERJ6GEYJ4		M.RESISTOR CH1/16W	47K	3	
					R6813	ERJ6GEYJ1		M.RESISTOR CH1/16W	10K	1	
5704	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1		R6814	ERJ6GEYJ2	K2	M.RESISTOR CH1/16W	2.2	1	
5706	VJJ0379	JACK UT 1/10W U	1		 	 					
707	VJJ0380	JACK	1		1├ ────├	 					
			-		SW6701-12	EVOCEDO		CUTTOU		\perp	
	1		\dashv		SW6701-12 SW6714	EVQQSB048		SWITCH		12	
	1		\dashv		SW6716,17	VSS0395		SWITCH		1	
			+		5,10,17	1220222	- +	SWITCH		2	∢ >
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Ref.No.	Part No.	Part Name & Description			Ref.No.	L	Part No.	Part Name & Description		Remarks
W6718,19	EVQQSB04B	SWITCH	2	<r></r>	C8048	L	ECEVOJV470	E.CAPACITOR 6.3V 47U	1	
16720	VS50220	SWITCH	1	<r></r>	C8049	L	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
6721-23	VSS0395	SWITCH	3	<r></r>	C8050	L	ECEV1CV100	E.CAPACITOR 16V 10U	1	
					C8051	L	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
					C8052	L	ECEV1CV100	E.CAPACITOR 16V 10U	1	
			<u></u>		C8053,54		ECUM1C334KBM	C.CAPACITOR CH 16V 0.33U	2	
6701,02	EVUF3AF15B24	V.RESISTOR 20K	2		C8056		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	,
6703	EVJYB0F15C23	V.RESISTOR 2K	1		C8057	Г	ECEV1CV470	E.CAPACITOR 16V 47U	1	
					C8058-60		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
					C8073,74	1	ECUM1C334KBM	C.CAPACITOR CH 16V 0.33U	2	
	1				C8093	H	ECEVICV470	E.CAPACITOR 16V 47U	1	
701	VSX0140	CRYSTAL OSCILLATOR	1	<r></r>	C8094	-	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
	11010210	ONIGHT GOODED HON	┝∸	***	C8096-99	⊢	ECEVOJV470			
					C8100	╀	ECEVOSV470	E.CAPACITOR 6.3V 47U	4	
	-					╀		C.CAPACITOR CH 50V 0.01U	1	
		MTCOTI I ANTONIO	ļ		C8101	L	ECUM1H12OJCN	C.CAPACITOR CH 50V 12P	1	
		MISCELLANEOUS	<u> </u>		C8102	L	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
	VSQ0651	JOG/SHTL ENCORDER	1			L				
	VGU6510	LED HOLDER	2							
	VJF1088	DISPLAY HOLDER	1			Г				
	VMP4258	FRONT MIC ANGLE	2		D8001	1	MA151K	DIODE	1	4₹>
	VMX1658	SPACER	4		D8002	1	MA151WK	DIODE	1	
-	XYE3+EF6	SCREW	1		08003	\vdash	11EQS04	DIODE	1	
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					<u> </u>	\vdash	L			
	+		ļ	L.,	FL8001	L	VLF0523	FILTER	1	
	1		<u> </u>		FL8002	L	ELB4R053	FILTER	1	
	VEP08164B	P.C.BOARD W/COMPONENT			<u> </u>	L				
		VIDEO (3)	L			Г				
						Т				
					IC8001	Γ	NJM2233BMA	IC	1	∢ R>
	1				IC8002	t	UPC2405HF	IC	1	
	+				IC8004	H	TC7WU04F	IC		
	-					⊢			1	
	 				IC8005	┡	MC74HC541F	IC	_1	
			<u> </u>		IC8006	Ļ.	HM63021FP	IC	_1	
	ļ		<u> </u>		IC8010	L	MST003MS	IC	1	∢ >
		CAPACITORS			IC8011		MC141625AFU	IC	1	∢ R>
3001	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		IC8013		HM63021FP	IC	1	∢>
3002,03	ECEVOJV470	E.CAPACITOR 6.3V 47U	2			Г				
3004	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1			T				
3005	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		1	T			_	
3006	ECEVOJV470	E.CAPACITOR 6.3V 47U	1		L8001-03	t	VLQ0163J470	COIL 47UH	3	
007	ECUM1H22OJCN	C.CAPACITOR CH 50V 22P	1		L8004	✝	VLQ0163J180			
8008	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		L8005	⊢	VLQ0163J220		1	
0009	ECEV1CV470	E.CAPACITOR 16V 47U	_			-			1	ļ
010			1		L8006	┡	VLQ0163J150	COIL 15UH	_1	
	ECEVOJV470	E.CAPACITOR 6.3V 47U	1		L8007	L.	VLQ0163J180	COIL 18UH	1	
011	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		L8008	L	VLQ0163J220	COIL 22UH	1	<u></u>
012	ECEV1CV470	E.CAPACITOR 16V 47U	1		L8009		VLQ0163J150	COIL 15UH	1	
013	ECEV1HV010	E.CAPACITOR 50V 1U	1		L8010-12	L	VLQ0163J470	COIL 47UH	3	
014	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		L8014,15	Γ	VLQ0163J220	COIL 22UH	2	
015	ECEVOJV101	E.CAPACITOR 6.3V 100U	1		7	Г				
017	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		1	1			_	·····
018	ECEVOJV101	E.CAPACITOR 6.3V 100U	1		11	t	<u> </u>			
019-21	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3		P8001	+	VJP3176B050	CONNECTOD (MALE)	•	
023,24	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U			1500	-	40L31/00/30	CONNECTOR (MALE)	1	
025,24	ECUM1H050DCN		2			ļ.				<u> </u>
		C. CAPACITOR CH 50V 5P	1			-				
026	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1			L	L			
027	ECEVOJV470	E.CAPACITOR 6.3V 47U	1		Q8001	L	MSC2295-B	TRANSISTOR	1	∢ R>
028	ECEV1EV4R7	E.CAPACITOR 25V 4.7U	1		Q8002	Ĺ	2SA1022-B	TRANSISTOR	1	∢ R>
029	ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1		Q8003	Г	MSD601-R	TRANSISTOR	1	∢ R> ,
031,32	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2		Q8004	Г	MSC2295-B	TRANSISTOR	1	
033	ECEVOJV470	E.CAPACITOR 6.3V 47U	1		Q8005	Γ	2SA1022-B	TRANSISTOR	1	₹ >
034	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		Q8006	Т	MSD601-R	TRANSISTOR		
035	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1		Q8007	-	MSC2295-B			
036	ECEVOJV470	E.CAPACITOR 6.3V 47U	1			-		TRANSISTOR	1	4>
037	ECUM1H22OJCN				Q8008,09	-	MSB709-R	TRANSISTOR	2	≪ >
			1		Q8010	<u> </u>	MSD601-R	TRANSISTOR	1	∢ ?>
038	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1		Q8018,19	L	MSC2295-B	TRANSISTOR	2	∢ R>
039	ECUM1H010CCN	C.CAPACITOR CH 50V 1P	1		Q8020	Ĺ	MSD601-R	TRANSISTOR	1	∢ >
040	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1							
041,42	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	2	· · · · · · · · · · · · · · · · · · ·						<u> </u>
043	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1		1	 				
044	ECUM1HO1OCCN	C.CAPACITOR CH 50V 1P	1		QR8002-06	-	MRN1404	TRANSISTOD PROTOTOR		
045	ECUM1H100DCN	<u> </u>			HANDOUZ-UO	-	rikin1404	TRANSISTOR-RESISTOR	5	∢ ?>
046			1			\vdash	ļ			ļ <u>-</u>
~~·	ECUM1H22OJCN	C.CAPACITOR CH 50V 22P	1		-	<u> </u>				
147		C.CAPACITOR CH 50V 0.01U	. 1			1				,
047	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1			-				l

Ref.No.	Part No.	Part Name & Description RESISTORS	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pc	Remarks
8001	ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1		1	+		+-	1
8002	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1					\vdash	
003	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1					† –	T
004	ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1						1
005	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1					_	1
006	ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1						1
007	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1						
008	ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1						
009	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1						
010	ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1						
011	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1						
012,13	ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	2			<u> </u>			
014	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1			<u> </u>			
015 016	ERJ6GEYJ330 ERJ6GEYJ223	M.RESISTOR CH1/16W 33	1		 	ļ			
017	ERJ6GEYJ103	M.RESISTOR CH1/16W 22K	1		I }				
018-25		M.RESISTOR CH1/16W 10K	1						
	ERJ6GEYG680	M.RESISTOR CH1/16W 68	8	······································					
052	ERJ6GEYOROO	M.RESISTOR CH 1/10W 0	1						
053	ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1		1			Ĺ	L
)54)56	ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1		 				
056	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1		/				
057	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1						
058	ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1						
059	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1						
060	ERJ6GEYG680	M.RESISTOR CH1/16W 68	1		I				
061	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1		<u> </u>				
062	ERJ6GEYG680	M.RESISTOR CH1/16W 68	1		<u> </u>				
063,64	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2						
067	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1						
068	ERJ6GEYJ754	M.RESISTOR CH1/16W 750K	1						
069	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1						
070	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1						
071	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1						
072	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1						
073,74	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	2			ļ.,			
075	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1						
096,97	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2						
098	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1						
099	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1						
100	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1						
101	ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1						
102	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1						
103	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1		 				
	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2						
106	ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1						
107	ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1						
109	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1						
	ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1						
110	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1			<u> </u>			
111	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1						
112-27	ERJ6GEYG680	M.RESISTOR CH1/16W 68	16						
129	ERJ6GEYOROO	M.RESISTOR CH 1/10W 0	1						
131	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1						
									L.
2001.52	FIREDOCTOC	W. 250-0-0			L				
3001,02	EVM7DGA00B23	V.RESISTOR 2K	2						
			_						
		Maria			<u> </u>				
	MCCAC	MISCELLANEOUS			<u> </u>				
	VSC4010	SHIELD CASE (TOP)	1						
	VSC4012	SHIELD CASE (BOTTOM)	1						
	VSC4011	SHIELD CASE (MAIN)	1						
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! Warning

I Warning

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Order No. VSD9605S207 D2, D4

Service Manual

Supplement

NTSC / PAL

Video Product

Subject: Change of HEAD AMP C.B.A.

Please use this supplement to	gether with the Service Manu	al as follows :	
Model No.	Bulletin No.	Order No.	Effective from
AG-MD830P	18	VSD9403M246	B5T
AG-MD830E	13	VSD9408M637	B5T
AG-7350-P	53	VSD9106M207	B5T
AG-7350RP	16	VSD9203M216	B5T
AG-7355-P	27	VSD9110M212	B5T
AG-7355RP	16	VSD9203M216	B5T
AG-7150-P	52	VSD9106M207	B5T
AG-7150-E/B	49	VSD9109M615	B5T
AG-7350-E/B	51	VSD9109M615	B5T
AG-7355-E/B	35	VSD9110M616	B5T
AG-6730P	35	VSD9206M222	B5T
AG-6730E	32	VSD9212M628	B5T
AG-6760P	24	VSD9210M227	B5T
AG-DS850P	77	VSD9403M244	B5T
AG-6045E	4	VSD9501M640	B5T

Board: HEAD AMP C.B.A.

The circuit board pattern has been changed for productivity, reliability and serviceability of the board.

Interc	hangeability	Code (I/C)									
A Origina	l or new parts may be use	d in early or late production	n set. Use original parts	until exhausted, then stoo	k new part	s.					
B Origina	l parts may be used in ear	ly production sets only. Ne	ew parts may be used in	early or late production s	ets. Use or	iginal par	ts possi	ble then stock new parts.			
	C New parts only may be used in early or late production sets. D Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.										
D Origina	Il parts may be used in ear	ty production sets only. Ne	w parts may be used in	late production sets only.	Stock both	original	and nev	v parts.			
E Others											
Part Num	ber										
Ref. No.	Original Part No.	New Part No.	Part Na	ame & Descriptions		Pcs	I/C	Remarks			
R5040	ERDS2TJ151	ERDS2TJ221	C.RESISTOR	1/4W	220	1	D	AG-MD830P/E, 7350-P/RP/E/B,			
			i					AG-7355-P/RP/E/B, 6760P			
R5062		ERDS2TJ221	C.RESISTOR	1/4W	220	1	D	AG-MD830P/E, 7350-P/RP/E/B,			
								AG-7355-P/RP/E/B, 6760P			
R5070	ERDS2TJ472					0	Ε	AG-MD830P/E			
								TE2-4122			

Panasonic

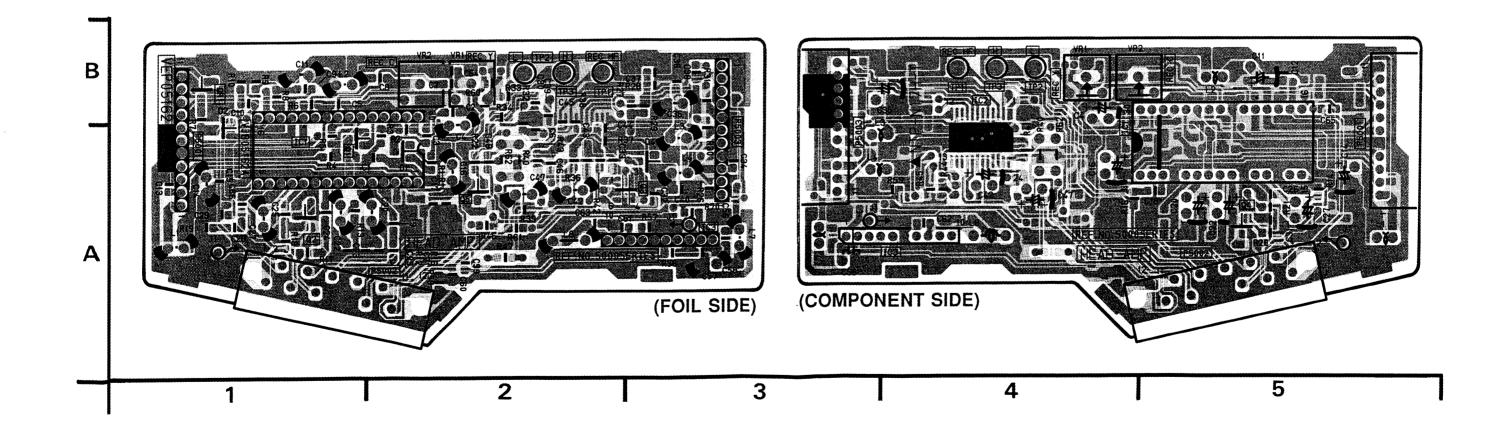
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VIDE-V01109 / DRUCK 69

Part Num	ber						
Ref. No.	Original Part No.	New Part No.	Part Name & Description	ons	Pcs	I/C	Remarks
R5070	ERDS2TJ472	ERJ6GEYJ472	M.RESISTOR CH 1/10W	4.7K	1	D	AG-7350-P/RP/E/B,7355-P/RP/E/B
R5070		ERJ6GEY0R00	M.RESISTOR CH	0	1	E	AG-6760P
R5041	ERJ6GEYJ180	ERJ6GEYJ100	M.RESISTOR CH 1/10W	10	1	D	AG-7350-P/RP/E/B,7355-P/RP/E/B
							AG-6760P, AG-DS850P
R5060		ERJ6GEY0R00	M.RESISTOR CH	0	1	E	AG-7350-P/RP/E/B,7355-P/RP/E/B
							AG-6730P/E, 6760P
R5061	ERJ6GEY0R00				0	Ε	AG-6760P
Q5006	2SD1450				0	E	AG-6760P, 6045E
IC5003		2SD1450	TRANSISTOR		1	E	AG-6760P, 6045E
C5057		ERJ6GEY0R00	M.RESISTOR CH	0	1	Ε	AG-6760P
C5060		ERJ6GEY0R00	M.RESISTOR CH	0	1	E	AG-6760P
W5001	ERJ6GEY0R00		M.RESISTOR CH	0	1	Ε	AG-6760P
					- 1		

	HEAD	D AMP C.B.A.	
Fransistor		Adjustment	
Q5001	A-1	VR5001	B-2
Q5002	A-1	VR5001	B-4
Q5003	A-3	VR5002	B-2
Q5004	A-5	VR5002	B-4
Q5005	A-2	Connector	<u> </u>
ransistor &	Resistor	P5001	A-1
QR5001	B-1	P5001	A-5
ntegrated Ci	rcuit	P5002	A-2
IC5001	A-1	P5002 P5003	A-5 A-3
IC5001	A-5	P5003	A-3
IC5002	A-4	1	
IC5003	A-3		
IC5003	A-4	1	
est Point			
TP5001	B-2		
TP5001	B-4		
TP5002	B-2		
TP5002	B-4		
TP5003	B-2		
TP5003	B-4		

ADDRESS INFORMATION



Order No. VSD9501S602

AWARNING

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ervice Manual

Supplement

Video Product

Please use this supplement together with the Service Manual as follows:

Model No.

Subject: Change of HIC

Bulletin No.

Order No.

Effective from

AG-MD830E

2

VSD9408M637

A5 - - -

Board: VIDEO (1)

Symptom: When a tape which has skew is played back, the APC circuit may not perform properly.

: The H-IC on the video 1 C.B.A. has been changed from VCR0380 to VCR0383. Remedy

Use	nal or new parts may b original parts until exha parts only may be use	usted, then stock ne	w parts.	В	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.					
E Othe		o in outly or late pro-	200.011 3013.	В	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.					
Part Nu	mber									
Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions		Pcs	I/C	Remarks			
C3801	VCR0380	VCR0383	ic		1	С				

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Order No. VSD9605S204 D4

Service Manual

Supplement

NTSC / PAL

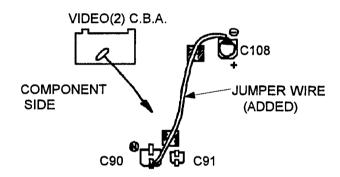
Video Product

Subject: Improvement of EE Chrominance Level

Model No.	Bulletin No.	Order No.	Effective from
AG-MD830P	16	VSD9403M246	I4T
AG-MD830E	11	VSD9408M637	14T

Board: VIDEO (2) C.B.A.

In order to improve the EE Chrominance level (out of spec.), following modification has been performed.



inter	cnan	gear	YIIIC	C00	le (//	C)
		<u> </u>				

- Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts
- B Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
- C New parts only may be used in early or late production sets.
- D Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts

E Others

Part Number

. 417.140111	1001						
Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions		Pcs	I/C	Remarks
R3351	ERJ6GEYJ122	ERJ6GEYJ132	M.RESISTOR CH 1/10W	1.3K	1	С	
R3372	ERJ6GEYJ132	ERJ6GEYJ122	M.RESISTOR CH 1/10W	1.2K	1	С	
R3375	ERJ6GEYJ122	ERJ6GEYJ112	M.RESISTOR CH 1/10W	1.1K	1	С	
R3435-37	ERJ6GEYJ750	ERJ6GEYG750	M.RESISTOR CH 1/10W	75	1	С	
IC3310	NJM2233BMA				0	Ε	
C3382	ECUM1H271JCN				0	Ε	
C3390	ECEVOJN470S				0	Ε	
C3391	ECEV0JV470S				0	Ε	

TE2-3986

Panasonic

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Subject : Countermeasure of mulfunction in Audio Dubbing

Model No.	Bulletin No.	Order No.	Effective from	
AG-MD830P	17	VSD9403M246	I4T	
AG-MD830E	12	VSD9408M637	I4T	

Board: AUDIO C.B.A.

SYMPTON: During Audio Dubbing mode, the level of recorded audio signal which is the other track of audio dubbing track may be reduced (erased) about 3dB.

REMEDY: The following modification has been performed.

Interc	hangeability	Code (I/C)					
A Origina	or new parts may be use	ed in early or late production	on set. Use original parts until exhausted, then sto	ck new part	s.		
B Origina	I parts may be used in ea	rly production sets only. N	ew parts may be used in early or late production s	ets. Use ori	ginal par	ts possi	ble then stock new parts
C New pa	arts only may be used in e	arly or late production set	5.				
D Origina	l parts may be used in ea	rly production sets only. N	ew parts may be used in late production sets only.	Stock both	original	and nev	v parts.
E Others							
Part Num	ber						
Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions		Pcs	I/C	Remarks
R4104	ERDS2TJ4R7	ERDS2TJ120	C.RESISTOR 1/4W	12	1	С	AG-MD830P
₹4104	ERDS2TJ4R7	ERDS2TJ150	C.RESISTOR 1/4W	15	1 1		AG-MD830E
R4107	ERJ6GEYJ333	ERJ6GEYJ473	M.RESISTOR CH 1/10W	47K	1 1		AG-MD830P
₹4107	ERJ6GEYJ473	ERJ6GEYJ104	M.RESISTOR CH 1/10W	100K	1 1	_	AG-MD830E
R4112	ERJ6GEYJ333	ERJ6GEYJ473	M.RESISTOR CH 1/10W	47K	1	_	IAG-MD830P
R4112	ERJ6GEYJ473	ERJ6GEYJ104	M.RESISTOR CH 1/10W	100K	1 1		AG-MD830E
					0	Ē	
		1			0	E	

TE2-4021

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advice non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service manual by anyone else could result in senious injury or death.

Service Manual

Supplement

Video Product

Subject: Correction of Service Manual

Please use this supplement together with the Service Manual as follows:

Model No.

Bulletin No.

Order No.

AG-MD830E

9

VSD9408M637

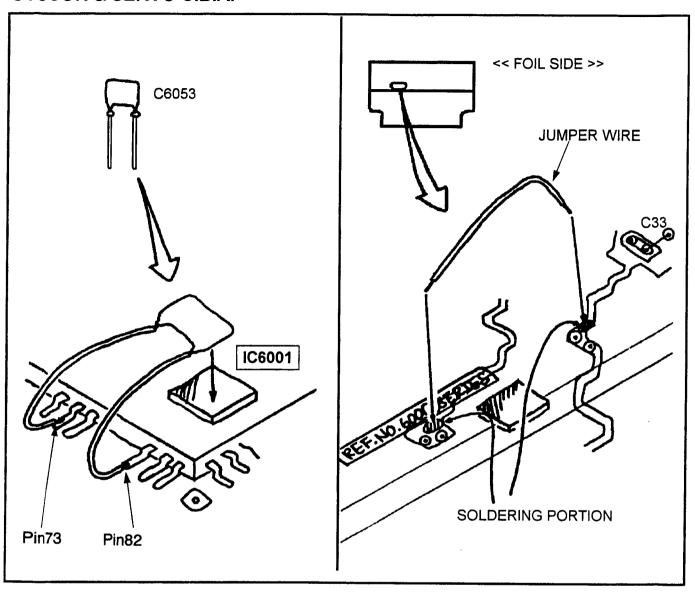
The information in the service manual has been corrected as follows.

Part Number							
Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions			I/C	Remarks
C6053		ECQV1H274JZ	P.CAPACITOR	50V 0.27UF	1	Ε	
C604 4	ECUV1H221KBN				0	Ε	
R3016	ERJ6GEYJ122	ERJ6GEYJ821	M.RESISTOR CH 1/16	SW 820	1	C	
R3017	ERJ6GEYJ122	ERJ6GEYJ471	M.RESISTOR CH 1/16	SW 470	1	С	
R3014	ERJ6GEYJ103	ERJ6GEYJ102	M.RESISTOR CH 1/16	SW 1K	1	С	
							<u> </u>

TE2-3943, TE2-3953

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SYSCON & SERVO C.B.A.



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Service Manual

Supplement

Video Product

Subject: Change of Transistor

Please use this supplement together with the Service Manual as follows:

Model No.

Bulletin No.

Order No.

Effective from

AG-MD830E

10

VSD9408M637

I4T

Board: SYSCON & SERVO C.B.A.

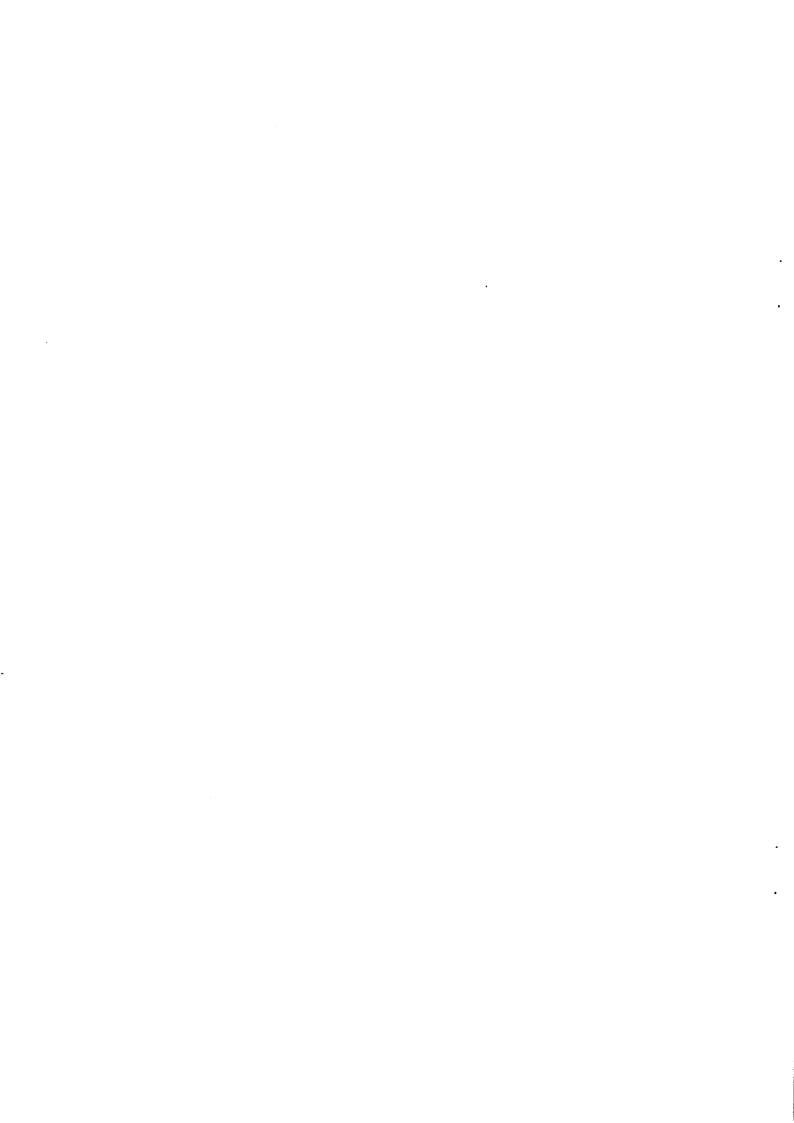
In order to increase hee of transistor, following transistor has been changed.

In	Interchangeability Code (I/C)								
A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.								
В	Original	parts may be used in ear	ly production sets only. Ne	w parts may be used in early or late production sets. Use orig	inal part	s possib	le then stock new parts.		
		rts only may be used in ea							
D	Original	parts may be used in ear	ly production sets only. Ne	w parts may be used in late production sets only. Stock both	original a	and new	parts.		
E	Others								
Parl	Part Nymber								
Ref	. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks		
QR2	904	MRN2404	MRN2402	TRANSISTOR-RESISTOR	1	С			
			Ī						
			1						

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TE2-3961



he general empting to ofessional Order No. VSD9608S603

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Service Manual

Supplement

Video Product

Subject: Change of Capacitor

Model No.	Bulletin No.	Order No.	Effective from
AG-7150-E/B	50	VSD9109M615	A5
AG-7350-E/B	53	VSD9109M615	A5
AG-7355-E/B	38	VSD9110M616	A5
AG-6040E	30	VSD9209M625	A5
AG-6730E	34	VSD9212M628	A5
AG-6045E	5	VSD9501M640	A5
AG-5700-E	18	VSD9202M619	A5
AG-MD830E	15	VSD9408M637	A5
AG-6840HE/B	32	VSD9004M602	A5
AG-6850H-E/B	32	VSD9006M603	A5
AG-6124E/B	9	VSD9406M635	A5
AG-5260E/B	9	VSD9404M633	A5
AG-7600E	8	VSD9502M642	A5
AG-7700E	12	VSD9502M642	A5
AG-8600E	6	VSD9512M601	A5
AG-8700E	6	VSD9512M601	A5

Board: POWER

Reason for Change

- The following part(s) has(have) been changed for serviceability improvement.
- ☐ The following part(s) has(have) been changed for productivity improvement.
- The following part(s) has(have) been changed for standardization.
- The following part(s) has (have) been changed for the safety regulation.

TE2-4417

nterchangeability Code (I/C)

- A Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.

 B Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.

 C New parts only may be used in early or late production sets.

 D Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.

 C Others

Part Number	P	art	Ν	um	ber
-------------	---	-----	---	----	-----

Part Num	Part Number								
Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks			
C1008	VCK0041	VCK0259K331A	CAPACITOR	1	С	AG-7150/7350/7355-E/B			
C1045	VCK0041	VCK0259K331A	CAPACITOR	1	C	AG-7150/7350/7355-E/B			
C1003-5	VCK0040	VCK0259K221A	CAPACITOR	3	c	AG-7150/7350/7355-E/B			
C1005	VCK0046	VCK0260K222A	CAPACITOR	1	l c	AG-6040/6730/6045E			
C1010	VCK0046	VCK0260K222A	CAPACITOR	1	c	AG-6040/6730/6045E			
C10038	VCK0046	VCK0260K222A	CAPACITOR	1	Č	AG-6040/6730/6450E			
C1001-3	VCC0046	VCK0260K222A	CAPACITOR	3		AG-6040/6730/6450E			
C1006	VCC0046	VCK0260K222A	CAPACITOR	1	c	AG-6040/6730/6450E			
C1036	VCC0046	VCK0260K222A	CAPACITOR	1	Č	AG-6040/6730/6450E			
C1037	VCC0024	VCK0262K222A	CAPACITOR	1	c	AG-6040/6730/6450E			
						· · · · · · · · · · · · · · · · · · ·			
C1002-3	VCK0083	VCK0260M332A	CAPACITOR	2	С	AG-MD830E/B			
Ç1004-5	VCK0043	VCK0259M102A	CAPACITOR	2	c	AG-MD830E/B			
				"	-				
C1102-5	VCK0083	VCK0260M332A	CAPACITOR	4	С	AG-5700-E			
					_	, <u>-</u>			
C1003-4	VCK0046	VCK0260K222A	CAPACITOR	2	С	AG-6840H/6850HE			
C1005	VCK0046	VCK0260K222A	CAPACITOR	1		AG-6840H/6850HE			
C1027-28	VCK0045	VCK0260K152A	CAPACITOR	2	C	AG-6840H/6850HE			
C1029	VCK0045	VCK0260K152A	CAPACITOR	1 1		AG-6840H/6850HE			
				`					
C1010	VCC0024	VCK0262M222A	CAPACITOR	1	С	AG-5260E/B			
C1011	VCC0046	VCK0260M222A	CAPACITOR	1		AG-5210E/B			
C1012	VCC0046	VCK0260M222A	CAPACITOR	1		AG-5210E/B			
	1				•				
C1010	VCC0024	VCK0262M222A	CAPACITOR	1	С	AG-6124/5260E/B			
C1011-12	VCK0046	VCK0260M222A	CAPACITOR	2		AG-6124/5260E/B			
C1001	VCC0024	VCK0262M222A	CAPACITOR	1 1	C	AG-6124/5260E/B			
C1002-3	VCC0046	VCK0260M222A	CAPACITOR	2	C	AG-6124/5260E/B			
C004	VCC0024	VCK0262M222A	CAPACITOR	1		AG-6124/5260E/B			
C1005-6	VCC0046	VCK0260M222A	CAPACITOR	2	C	AG-6124/5260E/B			
				-	•	710 012-1020015			
C1001-2	VCK0083	VCK0260M332A	CAPACITOR	2	С	AG-7600/7700/8600/8700E			
C1004-5	VCK0044	VCK0260M102A	CAPACITOR	2		AG-7600/7700/8600/8700E			
				_	•	7.0 7.000,77.00,0000,07.002			
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Order No. VSD9805S211

rvice Manual

Supplement

NTSC/PAL

Video Product

Subject: Countermeasure for Auto Repeat Playback

Please use this supplement together with the Service Manual as follows:

Model No.

Bulletin No.

Order No.

Effective from

AG-MD830P

24

VSD9403M246

F7----

AG-MD830E

19

VSD9408M637

F7----

Board: VIDEO 2

Symptom: Playback function may be stopped in the auto repeat mode.

Cause

: The "No Video Detection Circuit" may operate correctly due to the temperature charastaric of the AFC

circuit on the "No Video Detection Circuit".

Remedy: In order to prevent this symptom, the type of capacitor (C3318) has been changed.

Int	erc	hangeability (Code (I/C)							
Α	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.									
В	Origina	al parts may be used in ea	rly production sets only. I	New parts may be used in early or late production sets. L	se original par	ts possi	bie then stock new parts			
C	New p	arts only may be used in a	arly or late production se	ts.						
D	Origina	al parts may be used in ea	rly production sets only. I	New parts may be used in late production sets only. Stoc	k both original	and nev	v parts.			
Ε (Others									
Part Number										
Ref.	No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks			
C3318	3	ECUV1H392KBN	ECQB1H392JF	C. CAPACITOR 50V 3900P	1	С				

TE2-4916

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Order No. VSD9805S214 D1.4

rvice Manua

Supplement

NTSC / PAL

Video Product

Subject: Change of Bias Transformer

Model No.	Bulletin No.	Order No.	Effective from
AG-6840H-P	49	VRD8909M237	F7
AG-6850H-P	47	VRD9001M243	F7
AG-6842HP	11	VSD9302M230	F7
AG-MD830P	23	VSD9403M246	F7
AG-7350-P	63	VSD9106M207	F7
AG-6840H-E/B	36	VSD9004M602	F7
AG-6850H-E/B	36	VSD9006M603	F7
AG-MD830E	18	VSD9408M637	F7
AG-7350-E/B	54	VSD9109M615	F7

Circuit: AUDIO

Reason for Change

- The following part(s) has(have) been changed for serviceability improvement.
- The following part(s) has(have) been changed for productivity improvement.
- The following part(s) has(have) been changed for standardization.
- The following part(s) has (have) been changed for the safety regulation.
- The following part(s) has (have) been changed for durability improvement.

Interc	Interchangeability Code (I/C)								
A Origina	A Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.								
B Origina	al parts may be used in ea	rly production sets only. N	lew parts may be used in early or late production sets. U	lse original pa	rts possi	ble then stock new parts.			
	arts only may be used in e								
D Origina	al parts may be used in ea	rly production sets only. N	ew parts may be used in late production sets only. Stoc	k both original	and nev	v parts.			
E Others	E Others								
Part Num	Part Number								
Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks			
T4001	VLT0538B	VLT0538C	TRANSFORMER	1	С				

TE2-4861

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Order No. VSD9811S603

! Warning

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Service Manual

Supplement

PAL

Video Product

Subject: Change of Delay Circuit

Please use this supplement together with the Service Manual as follows:

Model No.

Bulletin No.

Order No.

Effective from

AG-MD830E

22

VSD9408M637

K7----

Board: VIDEO 1

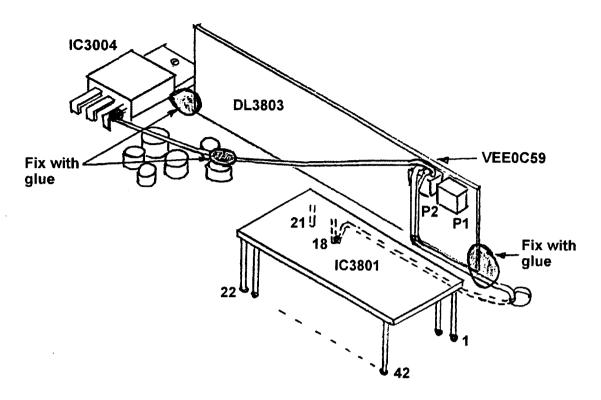
Reason for Change

The following parts have been changed because of discontinuation of Delay Line.

In	Interchangeability Code (I/C)								
Α	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.								
В	B Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.								
	C New parts only may be used in early or late production sets.								
D	Original	parts may be used in early	production sets only. New	parts may be used in late production se	ets only. S	tock both	original and new parts.		
E	Others								
Pa	rt Nur	nber							
Ref	f. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks		
DL:	3803	VLD0089	VEP00Z44C	DELAY LINE	1	D			
			VEE0C59	CABLE	1	E			
C38		ECUM1H680JCN			0	E			
L38		VLQ0163J150			0	E			
L38		VLQ0163J150			0	E			
R38		ERJ6GEYJ561	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	D			
R38	860	ERJ6GEYJ681	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	D			
		VHN0030	VHN0030	RIVET	2	Ε	3 Pcs → 2 Pcs		
							ļ		

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INSTALLATION OF CABLE



- 1. Remove the rivet(VHN0030) inserted into the hole by DL3803.
- 2. Install one side of the cable (VEE0C59) in the connector P2 of DL3803. (The shielding wire should be inserted into the terminal ② and ③ ② is signal and ③ is GND.)
- 3. Solder the wire of VEE0C59 (the wire connected to the terminal ① of P2 of DL3803) to the terminal 3 of IC3004.
- 4. Pass the wire of VEE0C59 (the wire connected to the terminal ② of DL3803) through the hole by DL3803 and solder it to the terminal 18 of IC3801.
- 5. Press down the cable so that the cable should lie along the surface of the P.C.Board.
- 6. Fix the delay line and the cable with glue as shown in the above figure. (Delay line should be fixed vertically.)

ELECTRICAL ADJUSTMENTS AFTER REPLACEMENT OF DELAY LINE

After replacement of delay line, the following electrical adjustments should be performed. 4-3-7. CNR ADJUSTMENT

PRODUCT INFORMATION

AG-IA232TC (RS-232C Interface)

Panasonic

Matsushita Electric Industric Co., Ltd. Audio and Video Systems Division

CONTENTS

- 1. AG-IA232TC Product Information
- 2. RS-232C Protocols (Ver. 2)

1. AG-IA232TC Product Information

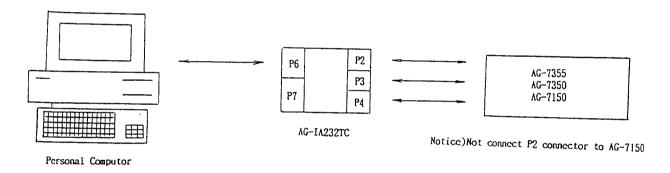
The RS-232C computer interface has become very popular recently due to its software interfacing which is incorporated into personal computers. Recently introduced new models (AG-7355, AG-7350 and AG-7150), also incorporate the RS-232C interfacing.

This information explains the AG-IA232TC and RS-232C interface.

1) Product Method

(1) Outline

This model is an optional interfacing board used to control the VTRs (AG-7355, AG-7350, AG-7150) with the RS-232C computer control system. The basic block diagram is shown below.



(2) Functions of this model

- 1) Front key operation
- 2) Address search by CTL/Time Code
- 3) Time Code Generator/Reader
- 4) Mode Status Reading
- 5) Looping through of up to 32 units

(3) VTR control functions are as follows

1) KEY CONTROL

The following VTR modes can be controlled by the RS-232C.

STOP EJECT REWIND FAST FORWARD STILL/PAUSE RECORD

AUDIO-DUBBING PLAY REVERSE PLAY REHEARSAL A-DUB REHEARSAL REC SHUTTLE SEARCH

2) COUNTER CONTROL

This controls the CTL counter which is inside the interface board as well as the reset counter, counter search and counter data of the VTR.

3) STATUS SENSE

Current Status modes of both interface board and VTRs can be sensed.

- 4) LTC READER (2 MODELS OF NTSC AND PAL VERSION)
- 5) LTC GENERATOR (2 MODELS OF NTSC AND PAL VERSION)

A TCG is incoporated and able to perform as follows: (VTRs must be set to proper modes.)

- (1)Records time code only continuously from beginning to end of tape.
- Records video signal and TC simultaneously from (2)REC RUN POINT.
- Presets time code data. (3)
- Time code has both Free Run and Rec Run. Free Run has both "REGEN" and "PRESET" modes. It's able to read and write user's bit. (4)
- (5)
- (6) Drop/Non Drop Frame Setting.

When an external TCR/G is used, it is not recommended to connect this internal TCR/G. Make sure to set EXT/INT of DSW2-8 to "EXT (OFF)" when the internal TCR/G is connected. If this switch is set to "ON" and the internal TCR/G is connected, the TCR/G this unit does not operate or even may damage the TCR/G.

6) Other Functions

- Reset of transmitting conditions
- (2) ON line checking
- (3) Group number Setting/Reset/Leader setting Stanby ON/OFF
- (4)
- (5) Digital (Other than AG-7355, it becomes still when a command is received during playback.)

- 7) External Interfacing Method
- (1)External Transmit Method

RS-232C SERIAL COMMUNICATION CONDITION

BAUD RATE 1200/2400/9600/19200 8BIT/7BIT BIT LENGTH PARITY NON/ODD/EVEN STOP BIT 1/2

* Underline indicates initial setting

Connector : D-SUB 25P DCE Method (Corresponds t o the Straight Cable)

INPUT CONNECTOR (P6)

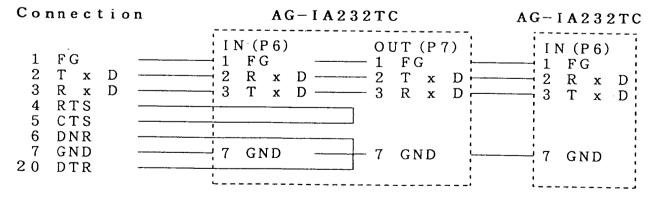
- 1 FG
- 2 RXD (RECEIVE)
- 3 TXD (TRANSMIT)
- 4 SHORT (CONNECT) TO 5
- 5 TO 4
- SHORT (CONNECT) SHORT (CONNECT) 6 TO 20
- GND20SHORT (CONNECT) TO 6

OUTPUT CONNECTOR (P7)

- 1 FG
- 2 TXD (TRANSMIT)
- 3 RXD (RECEIVE)
- GND

Up to 32 VTRs can be connected by looping through, when looping through function is provided Cable MAX length is 15m.

Note) RS-232C (AG-A730E) can not be connected since the power source is not a personal computer.



```
(2) DIP SWITCH Set conditions of transmitting. Address and INT/EXT of TCG
```

```
DIP SW1

1 BIT LENGTH 0. 7BIT

1. 8BIT

2 STOP BIT 0: STOP 1

1: STOP 2

3, 4PARITY (0. 0) ODD

(1. 0) EVEN

(X. 1) NON
```

5. 6 B a u d R a t e (0. 0) 1 2 0 0 (1. 0) 2 4 0 0 (0. 1) 9 6 0 0 (1. 1) 1 9 2 0 0

DIP SW2

1~5 ADDRESS ADDRESS 0 ~ ADDRESS 31
6 TCG INT/EXT 0:EXTERNAL
1:INTERNAL
0-OPEN/OFF
1-CLOSE/ON

8) Internal Interfacing Method

(1) Internal Transmitting

```
Connector P4
4, 10-GND
5 -SERIAL DATA (5Vp-p)
6 -SERIAL CLOCK (5Vp-p)
7 -CONTROL PULSE (5Vp-p) *
8 -OPEN
9 -5V
```

(2) Time Code Signal

Specifications are same as AG-7330.

```
Connector P2
1 — Hss (REC SYNC) 4Vpp (min 3.5)
2 — NC
3 — GND
```

(Notice) This Protocols chenge in time to time. If any proble should occur contact with your regional sales/service office.

Receiving format (controller ⇒ deck)

[STX]([AD][Address] [;]) [Command] [:][Data] ([;][Command] [:][Data]...)[ETX] (02h)(41h (0-31, A-Z)(3Bh) (XX XX XX)(3A)(XX-XX) (3Bh)(XX XX XX) (3Ah)(XX-XX) (03h) .44h) ascii code 20h < XX < 7Fh

() Data in parentheses () may be omitted.

AD Address identifier. This shall be AD' (binary 41h, 44h) in ASCII code. Address data. This shall be 2 characters. Addresses shall be 0 to 31

(limited by hardware). Groups shall be OA to OZ.

The semicolon shall follow the address designation, and shall serve as the code to separate commands. Use of the semicolon allows multiple commands (and data).

Command Command idetifier. Commands shall be 3 byte identifiers.

The colon shall separate commands and data.

Data This adds data with the required number of bytes.

(1) When a single deck is connected to the controller

The transmit command starts with STX (Start of Text = 02h). Command then identifies the command and adds the required data. Transmission ends with ETX(End of Text = 03h).

(2) When multiple decks are connected to the controller

After the above-described STX is received, the identifier (AD) and deck address or group number are added to designate one of several, or a group of decks.

When one statement contains several commands, commands are effected for that address from the time of identifier (AD) reception until the final ETX signal is received.

Once an address has been received, it cannot be changed until the next STX is transmitted—an error is generated if you try to change the address. When there is a command without a designated address, all connected decks receive and respond to the command, so addresses (or groups) must be designated when several decks are connected. With no designation, the hardware competes for communication lines, preventing proper transmission.

When the group number is received, data remaining in the transmit buffer is immediately cleared, and the communication line then goes to standby. The group number is set by the 232C command.

The 232C command can also designate one deck within the group as group leader. In this case, the groupsetting command triggers only the group leader to return ACK and NACK signals. Group leader designation is only in effect when the group number has been designated

Standby condition High-impedance condition for the communication line.

Address: Indecated the deck's absolute address. Hardware designates one address per unit. The protocol address is given in two-column formatsfrom 00 (30h 30h) to 9 (39h 39h). The absolute addresses for hardwareare 00 to 31 for connecting up to 32 units. Designating addressesother than these has no effect because no other addresses exist.

Group number: This number indicates a group of decks. It allows several decks to be designated. The number is set by theRGS command. Up to 26 groups can be desingated in two-column formats ranging from 0A(30h 41h) to 0Z(30h 5Ah). The default group number, such as when power is turned on, shall be 0A(30h 41h).

- (3) If STX is re-input before ETX is input, the internal transmit buffer on the deck side is cleared, priority is given to the received STX signal, and the buffer waits for the next command (or address) after STX to be input.
- (4) When the internal transmit buffer on the deck side is full, it clears and then waits for the next command.

2) Transmit format (deck ⇒controller)

When several commands are transmitted simultaneously, an ACK command signal is transmitted to last command received (prior to the ETX transmission). This is not true for the NACK return signal.

(1) ACX without answer

Returns the transmitte identifier.

[STX] +[Command]+[ETX]

(02h) (4Ih-5Fh)(03h)

Example: [STX] OPL $[ETX] \Rightarrow [STX]$ OPL [ETX]

(2) ACK with answer

Returns required data and identifiers after the second byte.

[STX]+ [Command After 2nd Byte] + [Data] + [ETX]

 $(02h) \qquad (XX XX) \qquad (XX XX) \qquad (03h)$

Example: $[STX]QOP [ETX] \Rightarrow [STX] OEJ [ETX]$

(3) NACK

When an NACK signal is transmitted, details indicating the reason why reception failed are returned in the form below: If an abnormal communication condition error is detected, the error signal is sent ahead of the NACK signal. This interrupts any data currently being transmitted, regardless of whether it has been completely received or not. Thus, the NACK signal is sent immediately, triggering the standby mode to await the next STX signal. NACK is only transmitted if a group leader is designated in the group setting mode several commands trasmitted simultaneously (transmitted in sections, each separated by a semicolon';') generates an error. The transmit and receive buffers clear at that point to await the next STX signal.

```
[STX] + [E] + [R] + [ERROR CODE] + [ETX]
```

(02h) (45h)(52h)

(03h)

1(31): YTR MODE ERROR(Abnormal of sensing tape end or start point)

2(32): VTR MODE ERROR(Elevator)

3(33): VTR MODE ERROR(Tape loading)

4(34): VTR MODE ERROR(Cylinder)

5(35): VTR MODE ERROR(Reel)

6(36): VTR MODE ERROR(Tension)

7(37): VTR MODE ERROR(Tripped solenoid)

D(44): VTR DEW

E(45): CONDIAND AND DATA SET ERROR

* Command and data setting error : Generated on reception of a non-existent command, an incorrect data code, data outside of the allowable range, or a non-receiving mode command.

[NACK] + [ERROR CODE]

(15h)

1(31): Parity error

3(33): Framing error

4(34): Over run error

- (4) If an address other than the one for the deck or the group is designated during or prior to ACK and NACK transmission, then data being returned or held in the buffer are cleared.
- (5) An ACK response is generated only to the last command received (prior to the ETX signal), When several commands (transmitted in sections, each separated by a semicolon';') are sent simultaneously.

3) Panasonic protocol command list

Basic The leader shall be the group name for each function, then assign more detailed functions.

[0] Basic operation

0EJ Eject Command **OSP** Stop Command Fast Forward Command OFF ORW Rewind Command ORC Record Command OPA Pause Command **OPL** Play Command **OPR** Play Reverse Command ODN Digital On (video memory) Command ODF Digital Off Command OBN Standby On Command **OBF** Standby Off Command OSF:data Shuttle Search Forward (CUE) Command and Data Shuttle Reverse (REVIEW) Command and Data OSR:data data: speed data 0-8 0=STILL **OPP** Play Pause Status

[E] Edit

ORP

EAD Audio Dubbing Command
EAP Audio Dubbing Pause Status

Record Pause Status

[I] In/output

IRR Rehearsal Record Command
IRA Rehearsal Audio Dubbing Command

[C] Counter

CRT Counter Reset Command CTL Counter CTL Mode Set Command CTC Counter Timecode Set Command CWT Write only Timecode Command TC Preset Mode Set Command CTP TC Regenerate Mode Set Command CTR TC Free Run Mode Set Command CTF TC Rec Run Mode Set Command CRR CUS:data UB Preset Command and Data CTS:data TC Preset Command and Data CDN Drop Frame On Command CDF Drop Frame Off Command

[S] Search operations

SCP:data Counter Search and Play Command and Data
SCS:data Counter Search and Still Command and Data
SMC Counter Search Mode Coarse(Search in FF and REW)
SMF Counter Search Mode Fine(Search in shuttle search speed)

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RCR
          Condition Reset Command (Resets communication conditions)
RCK
          Online Check Command (Nothing is operating)
RGS:data Group Set Command and Data
          Group Cancel Command
RGR:data Group Leader Set Command and Data
          (In effect only when the group is set)
[Q] Question
QOP
          Question Operation
          example answer: play = OPL
Q0S
          Question Operation Status
          example answer: OPS0001684000
          OPS+data(data is some status)
QCD
          Question Counter Data
          example answer: fine and still search when TC mode = CDFS 9595929
          CD+mode+data
          (mode: fine/coarse, still/play
          CTL data: sign + 9:59:59:29
          LTC data: 23:59:59:29)
QCT
          Question TC Mode
          example answer : free run and preset mode = CTFP
          CT + mode (mode free/rec run, regenerate/preset)
          Question UB Generator Data
QCB
          example answer: CUS01234567
          CUS+data(data = UB7 UB6 UB5 UB4 UB3 UB2 UB1 UB0)
QCU
          Question Reading UB Data
          example answer : CUR89ABCDEF
          CUR+data(data = UB7 UB6 UB5 UB4 UB3 UB2 UB1 UB0)
QCS
          Question TC Generator Data
          example answer: CTS23595929
          CTS+data(data = 23:59:59:29)
QCF
          Question Drop Frame Mode
          example answer: drop frame on = CDN
                            drop frame off = CDF
QRG
          Question Group Number
          example answer : group OA = RGSOA
         RGS+address data
QID
          Question DECK ID
          example answer: AG-IA232TC
QRY
          Question VTR Rom Version
          example answer: V1.00 4/1/91
          major minor version and release date
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[R] Communication mode